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     (FILE 'WPIDS' ENTERED AT 07:47:09 ON 26 OCT 1998)
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     FILE 'HCAPLUS' ENTERED AT 08:25:56 ON 26 OCT 1998
L1        160999 S BACTERIA OR MICROORGANISM? OR ORGANISM?
L2        147285 S ESCHERICHIA COLI OR  E COLI OR KLEBSIELL? OR ENTERBACTE
L3             8 S ENTEROBACTERIACAE
                 E ENTEROBACTER
L4          2792 S ENTEROBACTERIACEAE
L5        285981 S L1 OR L2 OR L4
L6          5341 S L5 (L) (DETECT? OR INDENTIF?)
L7          4634 S L5 (L) (IDENTI?)
L8          9617 S L6 OR L7
L9        310573 S APPT# OR APPARATUS?
L10         217 S L9 AND L8
L11       53273 S (WELL# OR COMPARTMENT#)
L12           0 S (WELL# OR COMPARTMENT#)/AT
L13      930342 S (WELL# OR COMPARTMENT#)/AB
L14          21 S L10 AND (L11 OR L13)
L15      235393 S (APPT# OR APPARATUS)/AB
L16          12 S L8 AND L15 AND (L11 OR L13)
L17          24 S L14 OR L16
L18       32945 S (FUNGI OR FUNGUS)
L19         757 S (FUNGI OR FUNGUS) (L) (DETECT? OR IDENTI?)
L20          20 S L19 AND (L9 OR L15)
L21          17 S L20 NOT L17
L22        1817 S SUSCEPTIBIL? (L) TEST?
L23           0 S (L17 OR L21) AND L22
L24          43 S L8 AND L22
L25        3716 S (ANTIMICROBIAL OR ANTIBIOTIC#) (L) SUSCEPTIBILI?
L26         708 S L25 AND (L17 OR L22)
L27           1 S L25 AND (L17 OR L21)
L28          73 S L8 AND (L22 OR L25)

     FILE 'REGISTRY' ENTERED AT 08:44:24 ON 26 OCT 1998
                 E AMOXICILLIN/CN
L29           1 S E3
                 E CLAVULANIC ACID/CN
L30           1 S E3
L31         122 S 58001-44-8/CRN
L32          93 S 26787-78-0/CRN
L33           7 S L31 AND L32
L34           1 S 79198-29-1
                 E ENROFLOXACIN/CN
L35           1 S E3

     FILE 'HCAPLUS' ENTERED AT 08:47:07 ON 26 OCT 1998
L36        3496 S L29 OR L34 OR L35 OR AMOXICILLIN OR AMOXICILLIN(A) CLAV
L37           6 S L36 AND L28
L38           0 S L19 AND (L22 OR L25) AND L36
L39        5608 S SENSITIVI? (L) (ANTIBIOT? OR ANTIMICROB)
L40        9162 S L39 OR L22 OR L25
L41         124 S L8 AND L40
L42           6 S L41 AND L36
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L43 24 S L8 AND (L9 OR L15) AND (L13 OR L11)
L44 24 S L43 NOT L42

=> d .ca l27

L27 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 1998 ACS
AN 1978:166359 HCAPLUS
DN 88:166359
TI Automatic analysis **apparatus** for microbiological samples
PA McDonnell Douglas Corp., USA
SO Neth. Appl., 43 pp.
CODEN: NAXXAN
PI NL 7701279 19771107
PRAI US 76-682664 19760503
DT Patent
LA Dutch
AB An automatic **app.** is described for identification of microorganisms and detn. of their antibiotic susceptibility within 13 h without the necessity of isolation of pure culture, at a rate of >100 specimens/day. A dil. suspension of the microorganism is inoculated into a card contg. a series of **wells** with various dehydrated culture media, and identification is made from changes in the media detd. optically. Antibiotic susceptibility is detd. in a sep. card contg. a series of **wells** with various antibiotics. The mech. construction and operation of the **app.** are described in detail.
IC G01N021-24
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3, 10
ST **microorganism identification app; antibiotic susceptibility microorganism app**
IT **Microorganism**
(**identification** of, **app.** for)
IT **Antibiotics**
(microorganism **susceptibility** to, **app.** for detn. of)

=> d .ca l42 1-6

L42 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 1998 ACS
AN 1998:175139 HCAPLUS
DN 128:267901
TI Microbial flora and **antimicrobial susceptibility** patterns of isolated pathogens from the horizontal ear canal and middle ear in dogs with otitis media
AU Cole, Lynette K.; Kwochka, Kenneth W.; Kowalski, Joseph J.; Hillier, Andrew
CS Department of Veterinary Clinical Sciences, College of Veterinary Medicine, The Ohio State University, Columbus, OH, 43210, USA
SO J. Am. Vet. Med. Assoc. (1998), 212(4), 534-538
CODEN: JAVMA4; ISSN: 0003-1488
PB American Veterinary Medical Association
DT Journal
LA English

AB A comparison study was carried out on microbial flora and antimicrobial susceptibility patterns of isolated pathogens from the horizontal ear canal and the middle ear in dogs with otitis media. Swab specimens of the horizontal ear canal and middle ear were obtained for cytol. anal., bacterial culture, and antimicrobial susceptibility testing. Integrity of the tympanic membrane was obsd. If the tympanic membrane was intact, myringotomy was performed to collect specimens. Otitis media was diagnosed in 38 of 46 (82.6%) ears evaluated. The tympanic membrane was intact in 71.1% of the ears with otitis media. The 3 most common organisms isolated from the horizontal ear canal and middle ear were Staphylococcus intermedius, yeast, and Pseudomonas spp. A difference in total isolates or susceptibility patterns between the horizontal ear canal and middle ear was found in 34 (89.5%) ears. Compared with results of bacterial culture, cytol. examn. of swab specimens was not as effective for detection of rods and cocci from the middle ear. In dogs with chronic otitis externa, otitis media often exists even when there is an intact tympanic membrane. In our study, the same isolates were rarely found in the horizontal ear canal and middle ear. Therefore, to choose appropriate antimicrobial agents, in addn. to cytol. examn., bacterial culture and susceptibility testing of swab specimens from the horizontal ear canal and middle ear should be performed.

IT **79198-29-1, Amoxicillin-clavulanic acid 93106-60-6, Enrofloxacin**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microbial flora and **antimicrobial susceptibility** patterns of isolated pathogens from the horizontal ear canal and middle ear in dogs with otitis media)

CC 9-12 (Biochemical Methods)
Section cross-reference(s): 10, 14

ST **microorganism identification**
antimicrobial susceptibility otitis media; yeast infection **antimicrobial susceptibility** otitis media

IT Antibacterial agents
Antibiotic resistance
Antibiotics
Bacterial infection
Diagnosis
Dog (Canis familiaris)
Pseudomonas
Staphylococcus intermedius
Yeast
(microbial flora and **antimicrobial susceptibility** patterns of isolated pathogens from the horizontal ear canal and middle ear in dogs with otitis media)

IT Ear diseases
(otitis media; microbial flora and **antimicrobial susceptibility** patterns of isolated pathogens from the horizontal ear canal and middle ear in dogs with otitis media)

IT 56-75-7, Chloramphenicol 60-54-8, Tetracycline 61-32-5, Methicillin 61-33-6, Penicillin G, biological studies 69-53-4, Ampicillin 127-69-5, Sulfisoxazole 153-61-7, Cephalothin 1403-66-3, Gentamicin 1404-04-2, Neomycin 1405-20-5, Polymyxin B sulfate 32986-56-4, Tobramycin 39474-58-3 **79198-29-1,**

Amoxicillin-clavulanic acid
93106-60-6, Enrofloxacin
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microbial flora and **antimicrobial susceptibility** patterns of isolated pathogens from the horizontal ear canal and middle ear in dogs with otitis media)

L42 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 1998 ACS
AN 1998:88546 HCAPLUS
DN 128:202919
TI Prospective study of catalase-positive coryneform **organisms** in clinical specimens: **identification**, clinical relevance, and **antibiotic susceptibility**
AU Lagrou, K.; Verhaegen, J.; Janssens, M.; Wauters, G.; Verbist, L.
CS Department of Microbiology, University Hospitals Leuven, Louvain, Belg.
SO Diagn. Microbiol. Infect. Dis. (1998), 30(1), 7-15
CODEN: DMIDDZ; ISSN: 0732-8893
PB Elsevier Science Inc.
DT Journal
LA English
AB During a 6-mo period, all clin. isolates of catalase-pos. coryneform organisms, which were isolated during the routine processing of clin. specimens, were characterized in the lab. of the 1800-bed University Hospital of Leuven. The distribution of the species in the corynebacteria was: Corynebacterium amycolatum 70 (53%), Corynebacterium jeikeium 16 (12%), Corynebacterium striatum 11 (8%), Corynebacterium afermentans 10 (7%), Corynebacterium minutissimum 9 (6%), CDC coryneform group G 4 (3%), Corynebacterium urealyticum 4 (3%), Corynebacterium glucuronolyticum 1 (0.7%), and Corynebacterium xerosis 1 (0.7%). Of the 150 isolates, 37 (25%) were considered to be infection related and the remaining 113 (75%) were of questionable clin. significance. Susceptibility of the corynebacteria to 12 antibiotics active against Gram-pos. organisms was evaluated. C. amycolatum, C. jeikeium, and C. urealyticum were multiresistant, but all isolates were susceptible to teicoplanin and vancomycin. Most of the C. amycolatum strains, and all strains of C. jeikeium and C. striatum, were susceptible to the vibriocidal compd. O/129.
IT **26787-78-0**, Amoxycillin
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(prospective study of catalase-pos. coryneform **organisms** in clin. specimens: **identification**, clin. relevance, and **antibiotic susceptibility**)
CC 10-5 (Microbial, Algal, and Fungal Biochemistry)
ST coryneform bacteria **antibiotic susceptibility** catalase
IT **Antibiotics**
Corynebacterium afermentans
Corynebacterium amycolatum
Corynebacterium glucuronolyticum
Corynebacterium jeikeium
Corynebacterium minutissimum
Corynebacterium striatum
Corynebacterium urealyticum

Corynebacterium xerosis
Coryneform **bacteria**
(prospective study of catalase-pos. coryneform **organisms** in clin. specimens: **identification**, clin. relevance, and **antibiotic susceptibility**)

IT 69-53-4, Ampicillin 114-07-8, Erythromycin 564-25-0, Doxycycline 1403-66-3, Gentamicin 1404-90-6, Vancomycin 6990-06-3, Fusidic acid 13292-46-1, Rifampicin 18323-44-9, Clindamycin 25953-19-9, Cefazolin **26787-78-0**, Amoxycillin 61036-62-2, Teicoplanin 82419-36-1, Ofloxacin
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(prospective study of catalase-pos. coryneform **organisms** in clin. specimens: **identification**, clin. relevance, and **antibiotic susceptibility**)

L42 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 1998 ACS
AN 1996:531311 HCAPLUS
DN 125:242258
TI Comparison of the Micronaut system with the API **test** and with the agar diffusion method in the **identification** and **susceptibility testing** of various **Enterobacteriaceae** and non-fermenting **bacteria**
AU Schmitz, Franz Josef; Berning, Thomas; Willers, Reinhart; Heinz, Hans Peter
CS Institut Medizinische Mikrobiologie Virologie, Heinrich-Heine-Universitaet Duesseldorf, Duesseldorf, D-40225, Germany
SO Klin. Labor (1996), 42(7/8), 609-619
CODEN: KLLAEA; ISSN: 0941-2131
DT Journal
LA German
AB The Micronaut and API systems were compared for identification of 438 gram-neg. Enterobacteriaceae and non-fermenting bacteria. The correlation between the 2 systems was 95%. Discrepant results were obsd. in 3% of the cases, and 2% of the bacteria could not be clearly identified. In addn., the resistance anal. results of the Micronaut system (breakpoint procedure) were compared to the agar diffusion test using the same samples. Some 86% of the results were identical. Some 13% of the cases differed by 1 resistance level, and 1% differed by >2 resistance levels. The agar diffusion test yielded higher resistance results more frequently. Reproducibility of the biochem. reaction varied by 1.3% in the intra- and 2.4% in the interassay analyses.
IT **26787-78-0, Amoxicillin**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(evaluation of **bacteria identification** tests and antibiotic resistance testing methods)
CC 9-12 (Biochemical Methods)
Section cross-reference(s): 1, 10
ST enterobacteria **identification antibiotic susceptibility** resistance **test**; nonfermentative **bacteria identification** bactericide **susceptibility test**
IT Bactericide resistance
Enterobacteriaceae
(evaluation of **bacteria identification** tests

and antibiotic resistance testing methods)

IT Bactericides, Disinfectants, and Antiseptics
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(evaluation of **bacteria identification** tests and antibiotic resistance testing methods)

IT **Bacteria**
(nonfermentative, evaluation of **bacteria identification** tests and antibiotic resistance testing methods)

IT 66-79-5, Oxacillin 69-53-4, Ampicillin 114-07-8, Erythromycin 1403-66-3, Gentamicin 1404-90-6, Vancomycin 1406-05-9, Penicillin 8064-90-2, Cotrimoxazole 18323-44-9, Clindamycin 25953-19-9, Cefazolin **26787-78-0, Amoxicillin** 32986-56-4, Tobramycin 37517-28-5, Amikacin 55268-75-2, Cefuroxim 56391-56-1, Netilmicin 58001-44-8 61036-62-2, Teicoplanin 61477-96-1, Piperacillin 63527-52-6 64221-86-9 64544-07-6, Cefuroxime-Axetil 68373-14-8, Sulbactam 72558-82-8, Ceftazidime 78110-38-0, Aztreonam 82419-36-1, Ofloxacin 85721-33-1, Ciprofloxacin
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(evaluation of **bacteria identification** tests and antibiotic resistance testing methods)

L42 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 1998 ACS
AN 1996:299125 HCAPLUS
DN 125:29522
TI Evaluation of an expert system linked to a rapid **antibiotic susceptibility testing** system for the detection of .beta.-lactam resistance phenotypes
AU Vedel, G.; Peyret, M.; Gayral, J. P.; Millot, P.
CS Laboratoire de Bacteriologie, Hopital Cochin, Paris, 75674/14, Fr.
SO Res. Microbiol. (1996), 147(4), 297-309
CODEN: RMCREW; ISSN: 0923-2508
DT Journal
LA English
AB Interpretive reading of antibiotic disk agar diffusion tests indicates the resistance mechanisms, if any, expressed by a bacterium. An expert system for detg. resistance mechanisms using rapid automated antibiotic susceptibility tests was developed. The .beta.-lactam susceptibility of each of 300 strains of clin. significant species of enterobacteria, displaying natural and acquired resistance mechanisms, was detd. by disk agar diffusion and by a rapid automated method of susceptibility testing assocd. with an expert system. For every strain, the conclusion of the expert anal. of the automated test was compared with the commonly accepted interpretation of disk agar diffusion tests. Of the 300 strains studied, 275 were similarly interpreted (91.7% agreement). The susceptible and naturally .beta.-lactam-resistant phenotypes (wild phenotypes) were equally recognized by both methods. Similarly, the results of the two methods concurred for most of the acquired resistance phenotypes. However, for 25 strains (8.3%) the results diverged. The expert system proposed an erroneous phenotype (5 strains), several phenotypes including the correct one (17 strains), or no phenotype (1 strain). For 2 strains the natural resistance mechanism was not detected at first by the automated method but was

subsequently deduced by the expert anal. according to bacterial identification. These results demonstrate that satisfactory interpretive reading of automated antibiotic susceptibility tests is possible in 4-5 h but requires careful selection of the antibiotics tested as phenotypic markers.

IT **26787-78-0, Amoxicillin**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(expert system linked to **antibiotic susceptibility testing** system for .beta.-lactam resistance phenotypes detection)

CC 9-12 (Biochemical Methods)
Section cross-reference(s): 1, 10

ST **antibiotic susceptibility** expert system lactam resistance

IT **Antibiotic** resistance
Enterobacteriaceae
(expert system linked to **antibiotic susceptibility testing** system for .beta.-lactam resistance phenotypes **detection**)

IT Computer application
(expert systems, expert system linked to **antibiotic susceptibility testing** system for .beta.-lactam resistance phenotypes detection)

IT **Antibiotics**
(.beta.-lactam, expert system linked to **antibiotic susceptibility testing** system for .beta.-lactam resistance phenotypes detection)

IT 153-61-7, Cephalothin **26787-78-0, Amoxicillin**
32887-01-7, Mecillinam 34787-01-4, Ticarcillin 35607-66-0, Cefoxitin 51481-65-3, Mezlocillin 55268-75-2, Cefuroxime 58001-44-8, Clavulanic acid 61477-96-1, Piperacillin 63527-52-6, Cefotaxime 64221-86-9, Imipenem 64952-97-2, Latamoxef 72558-82-8, Ceftazidime 78110-38-0, Aztreonam
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(expert system linked to **antibiotic susceptibility testing** system for .beta.-lactam resistance phenotypes detection)

L42 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 1998 ACS
AN 1995:425601 HCAPLUS
DN 122:209566
TI **Detection** of infectious **bacteria** in canine urinary tract infections and their **susceptibility** to quinolones and **antibiotics**
AU Kamata, Shin-ichi; Motozawa, Akihiko; Kakiichi, Norihide; Ohtsuka, Hiroharu; Ito, Osamu
CS Div. Vet. Hygiene, Nippon Vet. Anim. Sci. Univ., Musashino, 180, Japan
SO Bokin Bobai (1995), 23(2), 73-80
CODEN: BOBODP; ISSN: 0385-5201
DT Journal
LA Japanese
AB The in vitro activity of 14 antibacterial agents including new quinolones against canine urinary tract infection (UTI) pathogens was tested by using an agar diln. method. The bacterial strains

tested consisted of 32 strains from 5 species of gram-pos. bacteria, and 80 strains from 11 species of gram-neg. bacteria, which were isolated by 8 practitioners from Apr. 1991 to Oct. 1993. MIC values were evaluated in terms of the sensitivity or resistance breaking point, which was detd. in turn by referring to the NCCLS criteria and pharmacokinetics of each drug in dogs and cats. With regard to gram-pos. bacteria, the most active drugs against Staphylococcus aureus were enrofloxacin (ERFX), ciprofloxacin (CRFX) and ampicillin (ABPC) with MIC50 values of .ltoreq.0.05-0.39 .mu.g/mL, and those against coagulase-neg. Staphylococci (CNS) were ERFX, chloramphenicol (CP), erythromycin (EM) and CPFX with MIC50 values of 0.2-0.78 .mu.g/mL. Against Streptococcus canis, lincomycin and ERFX showed superior a MIC90 of 0.78 .mu.g/mL, and CPFX, ABPC and ERFX showed the lowest MIC90 values of 3.13-6.25 .mu.g/mL against Enterococcus faecalis. In the case of gram-neg. bacteria, ERFX and CPFX showed the strongest activity against Escherichia coli and Proteus spp. with MIC90 values less than 0.39 .mu.g/mL with 0% resistance, and the MIC90 values of ERFX against Klebsiella spp. and Serratia spp. were also lowest among 13 drugs. Against Pseudomonas aeruginosa and Pseudomonas spp., ERFX demonstrated excellent activity with a MIC90 of 0.78 .mu.g/mL and a resistance rate of 0%. In summary, the new quinolones, esp. ERFX, showed noticeable activity against most of the canine UTI pathogens, many of which were not sensitive to and even resistant to commonly used drugs. It was concluded that new quinolone drugs, in particular ERFX, showed excellent efficacy against canine UTI pathogens-esp. against gram-neg. bacteria. Its applicability in clin. usage was therefore implied.

IT **93106-60-6, Enrofloxacin**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(quinolone and **antibiotic susceptibility** of infectious **bacteria detected** in canine urinary tract infections)

CC 10-5 (Microbial, Algal, and Fungal Biochemistry)

ST canine urinary pathogen quinolone **antibiotic susceptibility**; **enrofloxacin** quinolone bactericide canine urinary pathogen

IT **Antibiotics**
Bactericides, Disinfectants, and Antiseptics
Canis familiaris
(quinolone and **antibiotic susceptibility** of infectious **bacteria detected** in canine urinary tract infections)

IT Urinary tract
(disease, quinolone and **antibiotic susceptibility** of infectious **bacteria detected** in canine urinary tract infections)

IT **Bacteria**
(gram-neg., quinolone and **antibiotic susceptibility** of infectious **bacteria detected** in canine urinary tract infections)

IT **Bacteria**
(gram-pos., quinolone and **antibiotic susceptibility** of infectious **bacteria detected** in canine urinary tract infections)

IT Onium compounds

RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(quinolinium, fluorides, quinolone and **antibiotic susceptibility** of infectious **bacteria detected** in canine urinary tract infections)

IT 56-75-7, Chloramphenicol 69-53-4, Ampicillin 114-07-8, Erythromycin 154-21-2, Lincomycin 85721-33-1, Ciprofloxacin
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(quinolone and **antibiotic susceptibility** of infectious **bacteria detected** in canine urinary tract infections)

IT **93106-60-6, Enrofloxacin**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(quinolone and **antibiotic susceptibility** of infectious **bacteria detected** in canine urinary tract infections)

L42 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 1998 ACS
AN 1992:37398 HCAPLUS
DN 116:37398
TI Comparison of conventional **susceptibility tests** with direct **detection** of penicillin-binding protein 2a in borderline oxacillin-resistant strains of **Staphylococcus aureus**
AU Gerberding, Julie Louise; Miick, Cathleen; Liu, Hans H.; Chambers, Henry F.
CS Dep. Med., Univ. California, San Francisco, CA, 94110, USA
SO Antimicrob. Agents Chemother. (1991), 35(12), 2574-9
CODEN: AMACCQ; ISSN: 0066-4804
DT Journal
LA English
AB Six selected strains of S. aureus classified as borderline oxacillin-resistant, according to std. disk diffusion and microdiln. susceptibility test methods, and seven methicillin-resistant and seven methicillin-susceptible control strains were examd. for the presence of penicillin-binding protein 2a (PBP 2a) by fluorog. and immunoblotting and for DNA hybridization with a mec-specific probe in a dot blot assay. Oxacillin agar screen tests with and without NaCl supplementation were also performed with all strains. PBP 2a was detected both by fluorog. and by immunoblotting in all seven methicillin-resistant control strains and in none of the susceptible controls. PBP 2a was detected in two borderline strains. Results of agar screen tests performed without NaCl supplementation were completely concordant with susceptibility detd. by PBP 2a and mec detection methods. Agar screening with NaCl supplementation was less accurate. These findings were confirmed with 20 addnl. borderline strains. Direct detection methods for the presence of PBP 2a or mec, the gene encoding it, allow accurate and definitive classification of borderline strains. Further efforts to develop a rapid, clin. useful, antibody detection system for PBP 2a are warranted.

IT **26787-78-0, Amoxicillin**
RL: PRP (Properties)
(susceptibility of, in Staphylococcus, methicillin resistance and detection of penicillin-binding protein 2a and mec gene in

relation to)
CC 9-12 (Biochemical Methods)
Section cross-reference(s): 1, 10
IT **Staphylococcus aureus**
(methicillin susceptibility in, **detection** of penicillin-binding protein 2a and gene mec formation with)
IT Proteins, specific or class
RL: ANST (Analytical study)
(PBP 2A (penicillin-binding protein 2A), methicillin resistance in **Staphylococcus aureus** in relation to **detection** of)
IT Gene, microbial
RL: ANT (Analyte); ANST (Analytical study)
(mec, **detection** of, in **Staphylococcus aureus**, methicillin resistance in relation to)
IT 66-79-5, Oxacillin **26787-78-0, Amoxicillin**
58001-44-8
RL: PRP (Properties)
(susceptibility of, in Staphylococcus, methicillin resistance and detection of penicillin-binding protein 2a and mec gene in relation to)
IT 61-32-5, Methicillin
RL: BIOL (Biological study)
(susceptibility to, in **Staphylococcus aureus**, **detection** of penicillin-binding protein 2a and mec gene in relation to)

=> d .ca 143 1-24

L43 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1998:174414 HCAPLUS
DN 128:305331
TI Identification of a sequence motif that confers SecB dependence on a SecB-independent secretory protein in vivo
AU Kim, Jinoh; Kendall, Debra A.
CS Department of Molecular and Cell Biology, The University of Connecticut, Storrs, CT, 06269, USA
SO J. Bacteriol. (1998), 180(6), 1396-1401
CODEN: JOBAAY; ISSN: 0021-9193
PB American Society for Microbiology
DT Journal
LA English
AB SecB is a cytosolic chaperone which facilitates the transport of a subset of proteins, including membrane proteins such as PhoE and LamB and some periplasmic proteins such as maltose-binding protein, in Escherichia coli. However, not all proteins require SecB for transport, and proteins such as ribose-binding protein are exported efficiently even in SecB-null strains. The characteristics which confer SecB dependence on some proteins but not others have not been defined. To det. the sequence characteristics that are responsible for the SecB requirement, a systematic series of short, polymeric sequences have been inserted into the SecB-independent protein alk. phosphatase (PhoA). The extent to which these simple sequences convert alk. phosphatase into a SecB-requiring protein was evaluated in vivo. Using this approach the roles of the polarity and charge of the sequence have been examd., as **well** as its location

within the mature region, in conferring SecB dependence. It was found that an insert with as few as 10 residues, of which 3 are basic, confers SecB dependence and that the mutant protein is efficiently exported in the presence of SecB. Remarkably, the basic motifs caused the protein to be translocated in a strict membrane potential-dependent fashion, indicating that the membrane potential is not a barrier to, but rather a requirement for, translocation of the motif. The alk. phosphatase mutants most sensitive to the loss of SecB are those most sensitive to inhibition of SecA via azide treatment, consistent with the necessity for formation of a preprotein-SecB-SecA complex. Furthermore, the impact of the basic motif depends on location within the mature protein and parallels the accessibility of the location to the secretion **app**.

CC 6-3 (General Biochemistry)
Section cross-reference(s): 10

IT **Escherichia coli**
Insertion (mutation)
Intracellular transport
Protein motifs
Protein sequences
(**identification** of a sequence motif that confers SecB dependence on a SecB-independent secretory protein in vivo)

L43 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1997:755112 HCAPLUS
DN 127:328681
TI Method and **apparatus** for the **identification** of **bacteria** and fungi in infection diagnosis
PA Sendrowski, Peter, Germany
SO Ger. Offen., 7 pp.
CODEN: GWXXBX
PI DE 19617338 A1 19971106
AI DE 96-19617338 19960430
DT Patent
LA German
AB Up to now, bacteria suspected of causing infections have been identified by using time-consuming and manual labor-intensive agar plate methods. Therefore, this invention concerns the use of beads with indicators permanently bound to their surfaces as **well** as a single liq. culture (instead of the usual large no. of individual plates) for the identification of disease microorganisms. The indicator beads, which are made of a chem. and mech. inert material, e.g., plastic, can be present in any desired combination in culture, and the test results can be analyzed rapidly and automatically. In an example, com. beads are surface coated with the indicator fluorescein diacetate, which contains a hydrolyzable ester group that is recognized by the lipase of the genus Pseudomonas. The indicator beads do not fluoresce in the inactive state; however, after addn. of Pseudomonas to the culture medium, the lipase of the bacteria interacts with the indicator, thereby activating and converting the indicator into a green fluorescent dye that can be detected at 520 nm (490 nm excitation) with a com. detector and used to identify Pseudomonas. The invention provides a reliable, fast, and economical method to identify microbial infections with greater specificity than before.
IC ICM C12Q001-04
ICS C12Q001-06; C12Q001-44; G01N021-77

CC 9-5 (Biochemical Methods)
Section cross-reference(s): 7, 10, 14
ST indicator bead **bacteria** fungi **microorganism identification**; Pseudomonas infection diagnosis culture indicator bead; lipase **detection** indicator bead **bacteria** infection; fluorescent indicator bead **bacteria identification**
IT Plastics, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(beads; **microorganisms identification** in infection diagnosis using indicator beads and single cultures)
IT **Bacteria** (Eubacteria)
Bacterial infection
Fluorometry
Fungi
Indicators
Infection
Lung diseases
Metabolism (microbial)
Microorganism
Mycosis
Pseudomonas
(**microorganisms identification** in infection diagnosis using indicator beads and single cultures)
IT 9001-62-1, Lipase
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**microorganisms identification** in infection diagnosis using indicator beads and single cultures)
IT 596-09-8, Fluorescein diacetate 2321-07-5D, Fluorescein, derivs.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**microorganisms identification** in infection diagnosis using indicator beads and single cultures)

L43 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1997:375498 HCAPLUS
DN 127:62686
TI Feasibility of detecting dipicolinic acid in Bacillus spores using a handheld IMS device with pyrolysis GC
AU Thornton, Sidney N.; Dworzanski, Jacek P.; McClennen, William H.; Meuzelaar, Henk L. C.; Snyder, A. Peter
CS Center Micro Analysis Reaction Chemistry, University Utah, Salt Lake City, UT, USA
SO Proc. ERDEC Sci. Conf. Chem. Biol. Def. Res. (1996), Meeting Date 1994, 601-607. Editor(s): Berg, Dorothy A. Publisher: National Technical Information Service, Springfield, Va.
CODEN: 64NAAX
DT Conference
LA English
AB The lack of a fieldable hand-held device able to provide real-time detection of bacterial spores has prompted the investigation of spore detection by interfacing a pyrolysis GC module to an existing hand-held ion mobility spectrometry (IMS) device. In this configuration, spore detection is achieved via the characteristic

decompn. product of dipicolinic (2,6-pyridinedicarboxylic) acid, i.e., picolinic (2-pyridinecarboxylic) acid (PA). Pos. identification of the PA peaks in the IMS profile was achieved by using a GC/MS configured in parallel with the GC/IMS system. Initial optimization of pyrolysis, gas chromatog., and ionization conditions was performed with model compds. Spores as **well** as whole microorganisms of the genus Bacillus were subsequently characterized and the picolinic acid marker identified by their GC/IMS as **well** as GC/MS profiles. Preliminary results of this study confirm that the degree of sepn. afforded by short capillary column should provide considerable protection against common environmental interferants (urban dust, pollens). Moreover, pyrolysis of bacterial spores after addn. of KH2PO4 yields an increased amt. of picolinic acid, thus extending the detection limit down to 100 ng of Bacillus spores.

CC 9-3 (Biochemical Methods)
Section cross-reference(s): 10

ST Bacillus spore **detection** IMS GC **app**; dipicolinate **detection bacteria** spore; ion mobility spectrometry dipicolinate spore **detection**; gas chromatog picolinate **bacteria** spore **detection**

L43 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1997:364582 HCAPLUS
DN 127:106242
TI Amplified enzyme-linked-immunofilter assays enable detection of 50 - 105 bacterial cells within 1 hour
AU Paffard, Sean M.; Miles, Roger J.; Clark, Carl R.; Price, Robert G.
CS Division of Life Sciences, King's College London, London, W8 7AH, UK
SO Anal. Biochem. (1997), 248(2), 265-268
CODEN: ANBCA2; ISSN: 0003-2697
PB Academic
DT Journal
LA English
AB Two enhanced enzyme-linked-immunofilter assay (ELIFA) methods for the rapid and quant. detection of whole bacterial cells are described. In the first method, specific antibody bound to bacterial cells was amplified using a secondary antibody and detected by the conjugated enzyme activity (peroxidase) of a third antibody in a chemiluminescent assay. In the second method, a chromogenic substrate was used in conjunction with a biotinylated secondary antibody and avidin. Both assays were conducted within 55 min using a 96-**well** continuous flow immunofilter **app**. The assay values were detd. either as the reflectance of developed x-ray film placed over chemiluminescent membranes or of pptd. chromogen on the membrane surface. The biotin/avidin method enabled quant. detection of approx. 60 to 105 cells. The detection limit (blank + 2 SD) of the chemiluminescent assay with a 30-s film exposure time was 50 cells. The ELIFA methods described represent a considerable advance in sensitivity over previous immunol. methods of detecting whole bacterial cells and suggest that immunol. methods may approach PCR in sensitivity.

CC 9-10 (Biochemical Methods)

IT **Bacteria** (Eubacteria)
(amplified enzyme-linked-immunofilter assays enable **detection** of 50 - 105 bacterial cells within 1 h)

L43 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1997:126051 HCAPLUS
DN 126:241797
TI Personal monitoring of exposure to genetically modified **microorganisms** in bioaerosols: rapid and sensitive **detection** using PCR
AU Nugent, Philip G.; Cornett, Johanne; Stewart, Ian W.; Parkes, Helen C.
CS Birkbeck College, University of London, London, WC1E 7HX, UK
SO J. Aerosol Sci. (1997), 28(3), 525-538
CODEN: JALSB7; ISSN: 0021-8502
PB Elsevier
DT Journal
LA English
AB Escherichia coli XL1-B cells, genetically modified to contain the gene for the com. important food-processing enzyme, bovine chymosin, were aerosolized in growth media to simulate a breach of containment. Aerosols, generated in a **well**-characterized bioaerosol test chamber, were sampled with 2 commonly used workplace aerosol samplers, the cyclone static area sampler and the Institute of Occupational Medicine (IOM) personal inspirable aerosol sampler. Polymerase chain reaction (PCR)-based detection procedures were developed for specific, sensitive, rapid detection and discrimination of captured aerosolized genetically-modified and unmodified E. coli cells. The IOM personal sampler was more useful than the cyclone sampler for aerosol capture and subsequent anal. using the PCR procedure. It allowed an apparent lower detection limit of an aerosol contg. 1.7 .times. 104 cells/m3, with results being obtained 4-5 h after sample collection.
CC 59-1 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 4, 10, 80
ST genetically modified **microorganism** bioaerosol sampling analysis; air analysis genetically modified **microorganism** bioaerosol; polymerase chain reaction **detection** **microorganism** bioaerosol
IT Aerosols
(bio-; monitoring and rapid, sensitive **detection** of genetically-modified **microorganisms** in bioaerosols using polymerase chain reaction procedures following collection in cyclone or personal aerosol samplers)
IT Air analysis
Industrial hygiene
Occupational health hazard
(monitoring and rapid, sensitive **detection** of genetically-modified **microorganisms** in bioaerosols using polymerase chain reaction procedures following collection in cyclone or personal aerosol samplers)
IT Sampling **apparatus**
(static area cyclone and personal; monitoring and rapid, sensitive **detection** of genetically-modified **microorganisms** in bioaerosols using polymerase chain reaction procedures following collection in cyclone or personal aerosol samplers)
IT **Escherichia coli**
(strain XL1-B; monitoring and rapid, sensitive **detection** of genetically-modified **microorganisms** in bioaerosols using polymerase chain reaction procedures following collection

in cyclone or personal aerosol samplers)
IT 9001-98-3, Chymosin
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(bovine; monitoring and rapid, sensitive **detection** of genetically-modified **microorganisms** in bioaerosols using polymerase chain reaction procedures following collection in cyclone or personal aerosol samplers)

L43 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1996:488831 HCAPLUS
DN 125:137240
TI Dual-labeling of objects for identification using nucleic acids and an alphanumeric label identifying the nucleic acids used
IN Alestroem, Peter
PA Pabio, Norway
SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2
PI WO 9617954 A1 19960613
DS W: AL, AM, AT, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
AI WO 95-IB1144 19951208
PRAI NO 94-4739 19941208
NO 94-4740 19941208
DT Patent
LA English
AB A method is provided for the labeling of objects such as industrial products, works of art, antiquities, securities, and environmental pollutants as **well** as of biol. material such as living organisms and viruses. The method comprises adding at least two chem. tags to the object. The information embedded in the first tag is not divulged to the public, comprises an informational content which can be amplified by means of mol. amplification (PCR), and which specifically identifies the identity and/or origin of the object. The second tag indicates the presence of the first label and is easily detectable. Also provided are the labeled objects and a method for detg. the identity and/or origin of the labeled objects. It is preferred that the chem. tags comprise an informational content which is in the form of an alphanumeric code and are nucleic acid fragments such as DNA or RNA.
IC ICM C12Q001-68
ICS G09F003-00; D21H021-46; G01N033-00
CC 9-15 (Biochemical Methods)
Section cross-reference(s): 4
IT Aircraft
Alcoholic beverages
Algae
Animal cell
Art
Bacteria
Computer program
Cyanobacteria
Documents

Electric **apparatus**
Explosives
Feed
Food
Fungi
Inks
Mycoplasma
Paper
Perfumes
Pharmaceuticals
Plant cell
Protozoa
Virus
Yeast
(labeling of; dual-labeling of objects for **identification** using nucleic acids and alphanumeric label **identifying** nucleic acids used)

IT **Bacteria**
(lactic acid, labeling of; dual-labeling of objects for **identification** using nucleic acids and alphanumeric label **identifying** nucleic acids used)

IT **Bacteria**
(propionic acid, labeling of; dual-labeling of objects for **identification** using nucleic acids and alphanumeric label **identifying** nucleic acids used)

L43 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1995:938358 HCAPLUS
DN 123:322200
TI Sample collecting and assay device
IN Foote, Nicholas Peter Martin; Grant, Peter Leonard
PA Celsis International PLC, UK
SO PCT Int. Appl., 18 pp.
CODEN: PIXXD2
PI WO 9525948 A1 19950928
DS W: AM, AU, BB, BG, BR, BY, CA, CH, CN, CZ, EE, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
AI WO 95-GB649 19950322
PRAI GB 94-5590 19940322
DT Patent
LA English
AB Disclosed is an assay device comprising a tube having a removable top closure on which is mounted an elongate member assocd. with swab means adapted to take up material to be assayed at the distal end of the elongate member, wherein the tube includes one or more frangible membranes defining one or more **compartments** each contg. a compartmentalized agent, and the elongate member is movable, within the tube, to break the one or more membranes and bring said distal end into contact with the or each agent. Such a device can be used , e.g., hygiene monitoring and sterility testing, to assay microorganisms by taking the microorganisms up in liq. on the swab, introducing the elongate member into the tube, and moving the elongate member with respect to the tube to break the one or more membranes and bring taken-up liq. and its contents into contact with

the or each agent. A conventional bioluminescence assay can then be used.

IC ICM G01N001-02
ICS B01L003-00; C12M001-30; G01N021-76

CC 63-8 (Pharmaceuticals)
Section cross-reference(s): 10, 61

ST **microorganism** collecting sampling **app** hygiene sterilization; ATP bioluminescence **bacteria** **detection** water

IT Bacteria
Collecting **apparatus**
Escherichia coli
Hygiene
Microorganism
Sampling **apparatus**
Sterilization and Disinfection
(sample collecting and assay device)

L43 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1995:357011 HCAPLUS
DN 122:204602
TI **Detection** of **bacteria** in urine using dip-slides. 1. Possible occurrence of false-negative results when dip-slides are used for urine containing antibacterial agents
AU Deguchi, Koichi; Yokota, Nozomi; Koguchi, Masami; Suzuki, Yumiko; Fukayama, Shigemi; Ishihara, Rika; Oda, Seiji
CS Sect. Stud., Tokyo Clin. Res. Cent., Tokyo, 120, Japan
SO Jpn. J. Antibiot. (1995), 48(1), 155-62
CODEN: JJANAX; ISSN: 0368-2781
DT Journal
LA Japanese
AB We studied clin. performance of, and effects of antibacterial agents on, dip-slides, using 2 types of dip-slides, URICULTE and DIASLIDE, newly developed urine culture devices. The quant. conventional culture method was also used as the control. When single species of bacteria were present in urine specimens of patients, results obtained using URICULTE and DIASLIDE agreed very **well**, and they, in turn agreed **well** with results obtained using the quant., conventional culture method, also. When urine specimens were spiked with Gram-neg. rods and Gram-pos. cocci together, URICULTE fail to provide quant. results because colonies were not **well** sepd. and confluent growth often resulted because of a large sample vol. this device employs. DIASLIDE which used a smaller amt. of sample, on the other hand, provided quant. results with adequate sepn. of colonies. When 3 antibacterial agents were added to urine specimens that were spiked with bacteria, DIASLIDE produced significantly higher nos. of colonies than URICULTE. The difference probably are due to the difference in vols. of specimens used in the 2 devices, the former device employs approx. 1/100 as much vol. of specimen as the latter. When the vol. used is large, inhibitory effect of antibiotics present in the urine may be high enough to adversely affect the growth of bacteria, thus DIASLIDE may provide false-neg. results.

CC 1-5 (Pharmacology)
Section cross-reference(s): 9, 10

IT Analysis
(clin., **app**., dip-slide; interference of residual

antibacterial agents in urine on dip-slide method for clin. efficacy evaluation in humans with urinary tract infections)

L43 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1993:665934 HCAPLUS
DN 119:265934
TI Method and **apparatus** for the analysis of biological material
IN Grant, Peter Leonard; Foote, Nicholas Peter Martin; Noble, Michael; Evans, Christopher Thomas
PA Celsis Ltd., UK
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
PI WO 9319199 A1 19930930
AI WO 93-GB577 19930322
PRAI GB 92-6124 19920320
GB 92-6143 19920320
GB 92-6147 19920320
GB 92-13444 19920624
DT Patent
LA English
AB A method for analyzing material in a liq. sample comprises distributing the sample equally by passage through a no. of discrete **wells** adapted to retain the material, the concn. of material being such that it is absent in .gtoreq.1 **well**; and analyzing the **wells** for the presence of retained material. A device for use in the method comprises a container for the sample; a unit comprising a no. of discrete **wells** adapted to retain the material and allow the passage of liq. under the application of reduced pressure; means for drawing liq. from the container and through the **wells** under reduced pressure; and a manifold or other means that provides uniform distribution of the sample passing from the container into the **wells**. The material to be analyzed may be DNA, RNA, or microorganisms. Views of the **app**. are shown. The method and **app**. were used to specifically detect and enumerate ST enterotoxin-producing Escherichia coli.
IC ICM C12Q001-06
ICS C12Q001-04; C12Q001-68; B01L003-00; G01N033-52
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3, 10
ST analysis **app** multiple **well** filter; DNA analysis **app** multiple **well** filter; RNA analysis **app** multiple **well** filter; microorganism analysis **app** multiple **well** filter; enterotoxin ST Escherichia analysis **app**
IT **Escherichia coli**
(ST enterotoxin-producing, specific **detection** and enumeration of, anal. **app**. for)
IT Microorganism
(anal. of, in **app**. contg. multiple **wells** adapted to retain test material in liq. passing through)
IT Deoxyribonucleic acids
Ribonucleic acids
RL: ANT (Analyte); ANST (Analytical study)
(anal. of, in **app**. contg. multiple **wells** adapted to retain test material in liq. passing through)

IT Filters and Filtering materials
(in anal. **app.** contg. multiple **wells** adapted to retain test material in liq. passing through)
IT Analysis
(**app.**, contg. multiple **wells** adapted to retain test material in liq. passing through)
IT Spectrochemical analysis
(bioluminescence, in **app.** contg. multiple **wells** adapted to retain test material in liq. passing through)
IT Toxins
RL: ANST (Analytical study)
(entero-, ST (heat-stable toxin), **Escherichia coli** producing, specific **detection** and enumeration of, anal. **app.** for)

L43 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1993:466849 HCAPLUS
DN 119:66849
TI Development and evaluation of optical sensors for the **detection** of **bacteria**
AU Swenson, Frank J.
CS AVL Photronics Corp., Roswell, GA, 30076, USA
SO Sens. Actuators, B (1993), B11(1-3), 315-21
CODEN: SABCEB; ISSN: 0925-4005
DT Journal
LA English
AB The objective is to develop a system with: (1) culture bottles contg. growth media and sterilizable optical sensors and (2) an instrument that would automatically monitor bottles and evaluate each for evidence of bacterial growth. CO2 optical sensors have been chosen for the system, since CO2 is recognized as a universal byproduct of bacterial metab. Fluorometric sensors, similar in principle to those described previously for measuring pCO2 levels in blood, have been developed and optimized. An instrument (AVL BDS-240) has also been developed. The BDS-240 is a noninvasive automated system for the rapid detection of aerobic and anaerobic bacteria as **well** as some fungi. The instrument and bottle system are optimized to detect the presence of bacteria and fungi in fresh human blood (blood cultures). The instrument is capable of storing a total of 240-culture bottles. The bottles are arranged in six racks, each of which holds up to 40 bottles. Racks are continuously heated at 35.degree.C and are agitated for the max. recovery of organisms. Samples are drawn from patients and injected directly into the culture bottles. The culture bottle is placed into a rack station. Each station has its own LED/photodiode optical unit. Every ten min LEDs (two racks at a time) illuminate the optical sensors in the bottles and photodetector measurements from each station are stored and evaluated for significant changes. Those bottles that indicate significant rate increases in CO2 are flagged as pos. In recent clin. evaluation, five hospitals collected approx. 10,000 blood specimens in duplicate and inoculated each specimen into four bottles. Fifty percent of these bottles have been tested by the hospital's existing blood-culture method and the other 50% tested with the AVL BDS-240 system. The clin. trials lasted approx. eight months and the BDS-240 has been found to be equiv. to the hospital's current method with regard to the isolation of relevant microorganisms. However, because of the continuous

monitoring capability, microorganisms are detected much faster by the BDS-240. In addn., the AVL system is much less labor intensive than the current methods of the hospitals.

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 10, 14, 73

ST **bacteria detection** optical sensor; fungi **detection** optical sensor; fluorescence sensor **microorganism detection**; blood **bacteria** fungi **detection app**; carbon dioxide **detector bacteria**

IT Blood analysis
(**bacteria** and fungi **detection** in human, optical sensors for)

IT **Bacteria**
Fungi
(**detection** of, in biol. samples, optical sensors for)

IT Sensors
(optical, fluorometric, for **microorganism detection** in biol. samples)

IT 124-38-9, Carbon dioxide, analysis
RL: ANT (Analyte); ANST (Analytical study)
(**detection** of, optical sensor for, in **bacteria detection**)

L43 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1993:229724 HCAPLUS
DN 118:229724
TI Field kit for detecting analytes
IN Richardson, John G.
PA Hawaii Chemtect International, USA
SO PCT Int. Appl., 17 pp.
CODEN: PIXXD2
PI WO 9307474 A1 19930415
DS W: AU, BR, CA, JP, KR, RU
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE
AI WO 92-US8345 19920930
PRAI US 91-774061 19911009
DT Patent
LA English
AB A field kit is disclosed for detection of analytes, as is a method for use of the field kit. The field kit comprises a tray and lid adhered to the surface of the tray. Reagent **compartments** are formed by recesses in the tray when the tray is adhered to the lid. Probe **compartments** may also be included if desired. In operation, the tray and lid are bent at a score line to open the **wells** contg. the reagents. The lid is bent to form an A-shaped structure so that the kit may be placed in an upright position for use. A portion of the lid is peeled back from the tray to release probes and other nonliq. components, if present. Diagrams of the field kit are included. In a preferred embodiment, the field kit is used for testing fish for the presence of ciguatoxins (no data).

IC ICM G01N021-75
ICS G01N033-48

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 4, 79, 80

ST analysis field kit; ciguatoxin fish detection field kit; **app**

analysis field kit
IT Toxins
RL: ANST (Analytical study)
(polyether, of marine **organism**, **detection** of, field kit for)
IT Polyethers, analysis
RL: ANST (Analytical study)
(toxins, of marine **organism**, **detection** of, field kit for)
IT Analysis
(**app.**, field kit with recesses and score line, for detection of ciguatoxins or other analytes)

L43 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1992:3201 HCAPLUS
DN 116:3201
TI Method and **apparatus** for **detection** of endotoxins of Gram-negative **bacteria**
IN White, David C.; Mittelman, Marc W.
PA USA
SO U.S., 7 pp.
CODEN: USXXAM
PI US 5059527 A 19911022
AI US 89-448071 19891208
DT Patent
LA English
AB A method and **app.** for detecting and detg. Gram-neg. bacterial endotoxins in a bacteria-contg. sample comprises extg. lipids from the sample with supercrit. CO2, hydrolyzing the lipid insol. residue with a mild acid catalyst, derivatizing the hydroxy fatty acids, and anal. using a GC and mass spectrometer. Results of the anal. allow detn. of .gtoreq.10 bacteria (or parts of bacteria)/100 mL, as **well** as specification of the type of Gram-neg. bacterial group. A flow chart of the method and a system diagram of the equipment used are included. Anal. of a sample contg. lyophilized Escherichia coli, Bacillus cereus, and the algae) Chlorella vulgaris is described.
IC ICM C12Q001-02
NCL 435029000
CC 9-3 (Biochemical Methods)
Section cross-reference(s): 4, 10
IT Toxins
RL: ANST (Analytical study)
(endo-, of Gram-neg. bacteria, method and **app.** for detn. of)
IT Bacteria
(gram-neg., endotoxins of, method and **app.** for detn. of)
IT Fatty acids, analysis
RL: RCT (Reactant)
(hydroxy, hydrolysis and derivatization and **detection** of, in detn. of endotoxin of Gram-neg. **bacteria**)

L43 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1990:95062 HCAPLUS
DN 112:95062
TI Luminescence test and exposure **apparatus**

IN Wannlund, Jon C.; Smith, Jerry W.
PA RMS Laboratories, Inc., USA; Difco Laboratories
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
PI EP 329120 A2 19890823
DS R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE
AI EP 89-102616 19890216
PRAI US 88-155955 19880216
US 89-308718 19890213
DT Patent
LA English
AB An **app.** for performing and measuring chem. reactions includes a reaction test **app.** having reaction **wells** wherein reactants are controllably mixed, and an exposure **app.** which receives and positions the reaction test **app.** adjacent a photog. film. Reaction **wells** with multiple chambers are provided and, in one form, a pos. pressure is used to force reactants from one chamber to the next. In another form, pour plates in which chambers have sloping interior walls are used, so that the act of tilting the pour plate moves reactants to the next stage of the process. In each form, care is taken to minimize the likelihood that light can stray from one test **well** to another, which could lead to erroneous results. The invention also provides an exposure **app.** in which the reaction test **app.** is placed to record on photog. film the luminescence produced by each test **well.** The exposure **app.** can apply pos. pressure to the test **wells** or permit a controlled inclination of the **wells,** depending upon the type of reaction test **app.** being used. In the preferred bioluminescent bacteriuria anal., a urine specimen is added to the first reaction chamber contg. reactants to release nonbacterial ATP into soln. and to eliminate the nonbacterial ATP from soln. This release and elimination reaction typically requires .apprx.10-60 min to complete. The urine treated to completion in the upper reaction chamber, contg. only ATP within bacteria, then is flowed to the final reaction chamber by tilting the **app.** so that the liq. flows along the surface and into the final reaction chamber. It is necessary that the elimination of nonbacterial ATP be completed before begining the reaction in the final reaction chamber, or erroneous results will be obtained. In the final reaction chamber the bacterial ATP is released and reacted with light-producing reagents which react with free ATP to create luminescence in an amt. related to the presence of bacterial ATP in the original sample, a reaction typically requiring only .apprx.30 s.
IC ICM G01N021-76
ICS G01N033-493; C12M001-18
CC 9-5 (Biochemical Methods)
ST luminescence reaction exposure **app;** **bacteria** **detection** urine luminescence **app**
IT **Bacteria**
(ATP of, **detection** of, in urine by luminescence assay, reaction test **app.** and exposure **app.** for)
IT Urine analysis
(bacterial ATP detection in, by luminescence assay, reaction test **app.** and exposure **app.** for)
IT Spectrochemical analysis

(bioluminescence, reaction test **app**. and exposure **app**. for)
IT Spectrochemical analysis
(luminescence, reaction test **app**. and exposure **app**. for)
IT 56-65-5, 5'-ATP, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, of bacteria, in urine, luminescence **app**. for)
IT 55-56-1
RL: ANST (Analytical study)
(luminescence test **app**. contg., for bacterial ATP detection in urine)
IT 67-68-5, Dimethylsulfoxide, uses and miscellaneous 70-30-4, Hexachlorophene 2591-17-5, D-Luciferin 7365-45-9 7786-30-3, Magnesium chloride, uses and miscellaneous 9000-95-7, Apyrase 9002-93-1, Triton X-100 9014-00-0, Luciferase 25322-68-3
RL: USES (Uses)
(luminescence test **app**. contg., for bacterial ATP detection in urine)

L43 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1986:105640 HCAPLUS
DN 104:105640
TI Self-contained device for carrying out specific binding assays
IN Richards, James Carlton; Taylor, Robert Bruce
PA du Pont de Nemours, E. I., and Co., USA
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
PI EP 166933 A1 19860108
DS R: BE, DE, FR, GB, IT, LU, NL
AI EP 85-106002 19850515
PRAI US 84-611589 19840518
DT Patent
LA English
AB A self-contained device is described for carrying out at least the 1st step of a specific binding assay. The device is a substitute for a cotton swab to detect microbial pathogens and consists of a 2-**compartment** tube contg. a removable rod having at 1 end a no. of filaments coated with a specific binding partner for the analyte to be detd. The device facilitates the collection of sample under suboptimal conditions (e.g., wide range of temps., humidity, microbial contamination).
IC ICM G01N033-543
ICS B01L003-00
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 10
ST **app** specific binding assay; pathogen **detection** binding assay **app**; **bacteria detection** binding assay **app**
IT Immunochemical analysis
(for pathogenic microorganisms, **app**. for, antibody immobilized on fibers in)
IT Antibodies
RL: ANST (Analytical study)
(immobilized on fibers, in **app**. for pathogenic **microorganism detection**)

IT Synthetic fibers
RL: ANST (Analytical study)
(in **app.** for pathogenic **microorganism** **detection** by immunoassay)
IT **Microorganism**
(pathogenic, **detection** of, **app.** for, specific binding partner immobilized on fibers in)

L43 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1986:48316 HCAPLUS
DN 104:48316
TI Concentrating and detecting biomolecules and cells and a means for this process
IN Sandstroem, Gunnar; Taernvik, Arne; Wolf-Watz, Hans
PA Syn-Tek AB, Swed.
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
PI WO 8503355 A1 19850801
DS W: AU, BR, DK, FI, HU, JP, NO, US
AI WO 85-SE26 19850123
PRAI SE 84-374 19840125
DT Patent
LA English
AB A method for concg. and detecting biol. substances with affinity properties is described. This method consists of passing a fluid sample of the substance of interest via a pump over a solid hydrophobic surface. A substance, to which the substance of interest shows affinity, is attached to the solid hydrophobic surface. A complex of the two substances is formed and enriches the substance to be detected. For example, Francisella tularensis was detected by coating a tube overnight at room temp. with rabbit antiserum against F. tularensis. Test samples were passed through the tube connected to a peristaltic pump. After washing, stationary exposure to alk. phosphatase-labeled antibodies was performed at 37.degree. for 1 h. The tubes were disconnected and substrate for alk. phosphatase was added. After incubation at 37.degree. for 30 min, the content of each tube was transferred to the **well** of a microplate and the absorbance at 405 nm was measured. When the test samples were left stationary in the tube, lower values were obtained in comparison to when samples were recirculated through the tube.
IC ICM G01N033-53
ICS C12Q001-00
CC 9-1 (Biochemical Methods)
ST biol sample affinity concn **detection**; Francisella **detection** flow E1A; **bacteria detection** flow immunoassay
IT Glass, oxide
RL: ANST (Analytical study)
(biol. materials adsorption on, in concn. and detection **app.**, flow in relation to)
IT Plastics
RL: USES (Uses)
(biol. materials adsorption on, in concn. and detection **app.**, flow in relation to)
IT Metals, uses and miscellaneous
RL: USES (Uses)

(biol. materials adsorption on, in concn. and detection **app.**, flow in relation to)
IT Polymers, uses and miscellaneous
RL: USES (Uses)
(biol. materials adsorption on, in concn. and detection **app.**, flow in relation to)
IT Cell
Escherichia coli
Francisella tularensis
Virus
Virus, bacterial
(concn. and **detection** of, by adsorption, flow **app.** for)
IT Antibodies
Antigens
Deoxyribonucleic acids
Ligands
Ribonucleic acids
RL: ANST (Analytical study)
(concn. and detection of, by adsorption, flow **app.** for)
IT Pumps
(for concn. and detection **app.**, for biol. materials)
IT Receptors
RL: ANST (Analytical study)
(for lectins, concn. and detection of, by adsorption, flow **app.** for)
IT Analysis
(of biol. materials, **app.** for concn. and)
IT Flow
(of biol. materials, in concn. and detection **app.**, adsorption in relation to)
IT Agglutinins and Lectins
RL: ANST (Analytical study)
(receptors for, concn. and detection of, by adsorption, flow **app.** for)
IT Blood-group substances
RL: ANST (Analytical study)
(A, **Escherichia coli** adsorption on, in concn. and **detection app.**, flow in relation to)
IT Laboratory ware
(tubing, biol. materials adsorption on, in concn. and detection **app.**, flow in relation to)
IT 9003-22-9
RL: ANST (Analytical study)
(biol. materials adsorption on, in concn. and detection **app.**, flow in relation to)
IT 7440-21-3, uses and miscellaneous
RL: USES (Uses)
(biol. materials adsorption on, in concn. and detection **app.**, flow in relation to)

L43 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1984:606745 HCAPLUS
DN 101:206745
TI Microbiological test processes and **apparatus**
IN Carr, Anthony Hugh; Jobling, Ian
PA Unilever PLC, UK; Unilever N. V.

SO Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
PI EP 118274 A1 19840912
DS R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE
AI EP 84-301273 19840227
PRAI GB 83-5324 19830225
DT Patent
LA English
AB A microbiol. test process and **app**. for identifying microorganisms that are producers of .beta.-lactamase (penicillinase) (I) are described. Thus, an aq. suspension of microorganisms (.apprx.108 organisms/mL) are incubated in a container with a test soln. poorly buffered against changes of pH; the mixt. contains an indicator which is capable of detecting the development of acidity by monitoring a decrease in the fluorescence of the soln. The incubation time ranges 1-18 h. For example, 100 mL of sterile 0.5% poly(vinylalc.) soln. contg. 204.8 mg penicillin G (Na salt) and 3.52 mg 4-methyl-umbelliferone was applied in 25-.mu.L aliquots to 0.5-mL plastic microtiter **wells**. Suspensions of 3 unidentified microorganisms, characterized as either a I nonproducer, a weak producer, or a strong producer were formed into an inoculum in peptone medium to a cell d. .apprx.108/mL; a 50-.mu.L sample of each of the 3 inocula was inoculated into a microtiter **well** and incubated for 4 h at 37.degree.. The initial fluorometru values (F0) and the fluorimetric values after 4 h incubation (F4) were measured. The test results gave good discrimination between producers and nonproducers of I. This method can conveniently be combined with antibiotic sensitivity testing of the same organism by using different microtiter **wells** of the same microtiter plate.
IC C12Q001-04; C12Q001-18; C12Q001-34
CC 7-1 (Enzymes)
ST lactamase beta **detection** microbiol fluorescence; penicillinase **microorganism detection** fluorescence; antibiotic sensitivity penicillinase **detection** microbiol
IT **Microorganism**
(antibiotic-degrading enzymes of, **detection** of, microbiol. fluorescence asay for)
IT 9001-74-5
RL: ANT (Analyte); ANST (Analytical study)
(**detection** of, of **microorganisms** by microbiol. fluorescence assay)
IT 9002-89-5
RL: BIOL (Biological study)
(in penicillinase **detection**, in **microorganisms**, microbiol. fluorescence assay in relation to)
IT 61-33-6, uses and miscellaneous 90-33-5
RL: USES (Uses)
(in penicillinase **detection**, in **microorganisms**, microbiol. fluorescence assay in relation to)
IT 3368-04-5 18319-93-2 26093-31-2D, L-alanyl peptide
RL: BIOL (Biological study)
(**microorganism** antibiotic sensitivity response to, penicillinase **detection** in relation to)

L43 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 1998 ACS

AN 1983:402601 HCAPLUS
DN 99:2601
TI Direct analysis of free fatty acids in bacteria by gas chromatography
AU Brondz, Ilia; Olsen, Ingar; Greibroek, Tyge
CS Dep. Chem., Univ. Oslo, Oslo, Norway
SO J. Chromatogr. (1983), 274, 299-304
CODEN: JOCRAM; ISSN: 0021-9673
DT Journal
LA English
AB Satd. and unsatd. synthetic fatty acids as **well** as free fatty acids of Haemophilus aphrophilus and Actinobacillus actinomycetemcomitans were sepd. by capillary gas chromatog. (GC) without derivatization, following extn. of lyophilized cells with hexane in a Soxhlet **app**. GC was carried out on a CP-Sil 5 glass capillary column and He was the carrier gas. Fatty acids were eluted successively according to increasing chain length and excellent sepn. was obtained. The method should be suitable for routine use in clin. microbiol. labs.
CC 9-3 (Biochemical Methods)
Section cross-reference(s): 10
IT Actinobacillus actinomycetemcomitans
Bacteria
Haemophilus aphrophilus
(fatty acids **detection** in, by gas chromatog.)

L43 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1980:142863 HCAPLUS
DN 92:142863
TI **Apparatus** for testing liquids using test strips
IN Fischer, Wolfgang; Langkau, Horst
PA Merck Patent G.m.b.H., Fed. Rep. Ger.
SO Ger. Offen., 17 pp.
CODEN: GWXXBX
PI DE 2826651 19800103
AI DE 78-2826651 19780619
DT Patent
LA German
AB An **app**. and procedure are used for the fast and simple characterization of liqs., esp. aq. suspensions of enzymes or metabolic products of microorganisms, and are of great value in routine investigations, esp. in the identification of microorganisms. The device consists of test strips held in a series of chambers, which are connected with each other at the top and bottom with a narrow channel, and of a filling inlet, which empties into the chambers. Thus, an unknown bacterial culture was mixed with 3 mL of 1% NaCl soln. and stirred with a glass rod till turbid. Then 1.5 mL of this suspension was pipetted into the **app**. The suspension distributed itself uniformly in the lower channels, and satd. the bottom of the test strips. Following the addn. of 0.5 mL silicone oil, which sufficed to seal the chamber, the system was incubated in a desiccator for 4 h at 40.degree.. The test strips in the chambers detected the following: glucose breakdown, lysine decarboxylase, citric acid utilization, indole, phenylalanine deaminase, nitrate reductase, H2S, urease, ornithine decarboxylase, and .beta.-galactosidase. Readings were taken at the end of 4 h. Evaluation of the results, as **well** as literature search,

suggested that the bacterial culture was Proteus vulgaris. Similar expts. led to the identification of Escherichia coli and to the diagnosis of diabetes mellitus.
IC G01N031-22; C12K001-04; G01N031-14; G01N033-16
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 10, 14
ST **app** test strip liq; enzyme **microorganism** **detection**; diabetes diagnosis urine analysis; color test strip **app**
IT Urine analysis
(**app**. with reagent test strips for)
IT **Bacteria**
Escherichia coli
Microorganism
Proteus vulgaris
(**detection** of, **app**. with reagent test strips for)
IT Analysis
(biochem., **app**. with reagent test strips for)

L43 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1978:166359 HCAPLUS
DN 88:166359
TI Automatic analysis **apparatus** for microbiological samples
PA McDonnell Douglas Corp., USA
SO Neth. Appl., 43 pp.
CODEN: NAXXAN
PI NL 7701279 19771107
PRAI US 76-682664 19760503
DT Patent
LA Dutch
AB An automatic **app**. is described for identification of microorganisms and detn. of their antibiotic susceptibility within 13 h without the necessity of isolation of pure culture, at a rate of >100 specimens/day. A dil. suspension of the microorganism is inoculated into a card contg. a series of **wells** with various dehydrated culture media, and identification is made from changes in the media detd. optically. Antibiotic susceptibility is detd. in a sep. card contg. a series of **wells** with various antibiotics. The mech. construction and operation of the **app**. are described in detail.
IC G01N021-24
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3, 10
ST **microorganism identification app**; antibiotic susceptibility **microorganism app**
IT **Microorganism**
(**identification** of, **app**. for)
IT Antibiotics
(microorganism susceptibility to, **app**. for detn. of)

L43 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1976:86696 HCAPLUS
DN 84:86696
TI **Apparatus** and method for radioisotopic **identification** of **microorganisms**
IN Schrot, Joseph R.

PA Biospherics Inc., USA
SO Fr. Demande, 46 pp.
CODEN: FRXXBL
PI FR 2256246 19750725
PRAI US 73-429629 19731228
DT Patent
LA French
AB Microorganisms are identified by obtaining a radiorespirometric profile which is compared with std. profiles. Thus, a human stool specimen suspected of being infected with Salmonella is streaked on the diagnostic medium and incubated overnight at 35.degree.. The following day the plates are read and colonies believed to be a Salmonella species are removed, suspended in saline, and adjusted to an optical density of 1. About 0.05 ml of cell suspension is added as a drop to each **well** in the microculture plate. Each **well** in this plate contains 0.05 microcuries of a different 14C-labeled substrate and is covered with a sheet that is impregnated with Ba(OH)2. The microculture plate is incubated for 1 hr and the Ba(OH)2-contg. lid is removed and dried. Buffer contg. the dried Ba(OH)2 is analyzed for its radioactivity and the cpm for each substrate is automatically recorded. A radiorespirometric profile is obtained and compared with std. profiles using a computer. The Salmonella species in question is thus identified.
IC C12K; A61B
CC 10-13 (Microbial Biochemistry)
ST **bacteria identification** radioisotope
IT **Bacteria**
(radioisotopic respiration detn. in **identification** of)

L43 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1971:20309 HCAPLUS
DN 74:20309
TI Diagnostic method and **apparatus** for **detection** of **bacteria**
IN Wadley, Clark S.; Kenney, Donald S.
PA Abbott Laboratories
SO Ger. Offen., 20 pp.
CODEN: GWXXBX
PI DE 2004560 19700917
PRAI US 19690203
DT Patent
LA German
AB The bacteriol. examn. of a fluid such as urine can be performed by the use of an **app.** consisting of 4 **compartments,** contg. each a medium specific for a detd. type of bacteria. Thus the first **compartment** contains a dextrose medium which enables the microorganisms to develop and can be used for the catalase reaction and to det. the dextrose fermentation. The 2nd **compartment** contains an eosine-methylene blue-agar medium, inhibitory to the growth of the gram-pos. bacteria and the lactose fermentation of the other species. The 3rd **compartment** contains an urea-gelatin medium for the detection of urease and gelatinase production; the 4th **compartment** contains a citrate medium for the detection of citrate-metabolizing orga-nisms. By incubating the 4 media for 18-24 hr at 35-37.degree., E. coli, Klebsiella-Aerobacter, Pseudomonas, Proteus, staphylococci and (or) enterococci can be detd. simultaneously. By using square or

rectangular cells or **compartments** for the different media, their inoculation can be done easily with the aid of a special spade consisting of a rod, one end of which is bent in the form of a figure 7, this end being covered with an absorbent substance so that an easy and even distribution of the fluid to be analyzed over the different media is obtained. For convenience, the **compartments** are preferably arranged in a lidded box form. A scheme for the practical analysis of urine is given.

IC C12K; G01N
CC 6 (Biochemical Methods)
ST urine anal bacteria **app**; bacteria urine anal **app**
IT Urine, analysis
(**bacteria detection** in, **app**. and procedure for)
IT **Bacteria**
(**detection** of, in urine, **app**. and procedure for)

L43 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1971:951 HCAPLUS
DN 74:951
TI Whole **microorganisms** studies by pyrolysis-gas chromatography-mass spectrometry. Significance for extraterrestrial life **detection** experiments
AU Simmonds, Peter G.
CS Space Sci. Div., Jet Propul. Lab., Pasadena, Calif., USA
SO Appl. Microbiol. (1970), 20(4), 567-72
CODEN: APMBAY
DT Journal
LA English
AB Pyrolysis-gas chromatog.-mass spectrometric studies of 2 microorganisms, Micrococcus luteus and Bacillus subtilis var niger, indicate that the majority of thermal fragments originate from the principal classes of bioorg. matter found in living systems such as protein and carbohydrate. Furthermore, there is a close qual. similarity between the type of pyrolysis products found in microorganisms and the pyrolyzates of other biol. materials. Conversely, there is very little correlation between microbial pyrolyzates and comparable pyrolysis studies of meteoritic and fossil organic matter. These observations will aid in the interpretation of a soil org. anal. expt. to be performed on the surface of Mars in 1975. The science payload of this landed mission will include a combined pyrolysis-gas chromatog.-mass spectrometry instrument as **well** as several direct biology expts. which are designed to search for extraterrestrial life.
CC 6 (Biochemical Methods)
ST **microorganisms** life **detection**; extraterrestrial soil anal; soil anal extraterrestrial; pyrolysis chromatog soils; chromatog pyrolysis soils; mass spectrometry soils; life **detection** soils anal
IT Pyrolysis
(**app**. for gas chromatog. and mass spectroscopy associated with, for extraterrestrial life detection)
IT Chromatography, gas
(**app**. for pyrolysis and mass spectroscopy associated with, for extraterrestrial life detection)
IT Life

(extraterrestrial, **app.** for detection of, on Mars)
IT Mass spectroscopy
(of pyrolysis products of **microorganisms**, extraterrestrial life **detection** in relation to)

L43 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1970:411326 HCAPLUS
DN 73:11326
TI **Detection** of the sensitivity of **microorganisms** to antibiotics
IN Saunders, Robert G.
PA Litton Systems, Inc.
SO U.S., 5 pp.
CODEN: USXXAM
PI US 3509026 19700428
AI US 19670119
DT Patent
LA English
AB The present invention provides for the methods and **app.** assocd. with the title process. In the past, several **well** known methods have been employed. However, these tests in general took a relatively long time to complete. The present method provides a rapid and universal method of detg. the sensitivity of substantially all bacteria to a variety of antibiotics. A mounting strip is provided with a series of pads formed from inert material. This is secured to a carrier which is suitable for advancing the mounting strip and the pads for processing. Each pad is provided with a nutrient medium, an antibiotic agent, and a substrate. The pad is inoculated with bacteria and then incubated. The substrate is acted upon by a vital enzyme system which produces a detectable end product that is indicative of bacterial growth. Bacteria sensitive to antibiotic agents produce limited end products, indicating antibiotic sensitivity. One substrate which is reactive with the vital enzyme system alk. phosphate is flavone 3-diphosphate. This system hydrolyzes the flavone 3-diphosphate to produce the fluorescent end product, 3-hydroxyflavone. This is detectable and provides an indication of the antibiotic sensitivity of the bacteria producing the alk. phosphate.
IC G01N; C12K
NCL 195103500
CC 6 (Biochemical Methods)
ST antibiotics screening **app**; screening **app** antibiotics; microbial sensitivity antibiotics; bacteria sensitivity antibiotics
IT **Bacteria**
(antibiotics sensitivity of, **detection** of, systems for)

L43 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 1998 ACS
AN 1969:95477 HCAPLUS
DN 70:95477
TI Microbial mutant detection
IN Ricard, Jacques L.
PA Baer, Martin C.
SO U.S., 6 pp. Division of U.S. 3255095
CODEN: USXXAM
PI US 3424655 19690128
AI US 19650409

DT Patent
LA English
AB A desired mutant is continuously and automatically detected with an **app**. consisting of a vessel contg. a culture medium in which a large population of microorganisms are undergoing mutation. Predetd. amts. of medium are successively taken from the vessel and mixed with predetd. amts. of selective medium and incubated. The selective medium is such that it provides an environment which allows the desired mutant to develop progeny while nonmutants deteriorate, the selective medium being characterized by being capable of being changed by the desired mutant but not by the nonmutants. Thus, the **app**. may be used to obtain an organism able to remain active in a medium contg. a concn. of a desired end product toxic to the normal population. A search for a yeast mutant able to remain active until the EtOH concn. reaches 16% is made. Yeasts usually do not grow in a medium where the EtOH concn. is 13-14% by vol. A large yeast population is grown in a continuous culture **app**. operating on the Turbidostat principle, wherein a photoelectric cell controls the fresh medium from the vessel by activation of a solenoid valve. A plentiful air circulation is maintained in the mutagenic population in order to obtain max. cell multiplication rate and min. EtOH production. When the culture has reached the 70-80% level of max. population d. allowed by the nutrient concn. in the medium, a 15-ml. portion is released to 1 tube of a fraction collector, while a 3.1-ml. aliquot of 95% EtOH is delivered to the same tube. The concn. of EtOH will inhibit a normal yeast population, resulting in a clearing of the tube cloudiness, while a mutant unaffected by the EtOH concn. will multiply and increase cloudiness of the tube contents as **well** as further CO2 formation. Drawings are given illustrating the **app**.
IC C12K
NCL 195127000
CC 16 (Fermentations)
IT Mutation
(from microorganisms, **app**. for)
IT **Microorganisms**
Rhizopus
Yeasts
(mutants, **app**. for **detection** of)

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     (FILE 'WPIDS' ENTERED AT 07:47:09 ON 26 OCT 1998)
               DEL HIS Y

     FILE 'HCAPLUS' ENTERED AT 08:25:56 ON 26 OCT 1998
L1        160999 S BACTERIA OR MICROORGANISM? OR ORGANISM?
L2        147285 S ESCHERICHIA COLI OR  E COLI OR KLEBSIELL? OR ENTERBACTE
L3             8 S ENTEROBACTERIACAE
                 E ENTEROBACTER
L4          2792 S ENTEROBACTERIACEAE
L5        285981 S L1 OR L2 OR L4
L6          5341 S L5 (L) (DETECT? OR INDENTIF?)
L7          4634 S L5 (L) (IDENTI?)
L8          9617 S L6 OR L7
L9        310573 S APPT# OR APPARATUS?
L10         217 S L9 AND L8
L11       53273 S (WELL# OR COMPARTMENT#)
L12           0 S (WELL# OR COMPARTMENT#)/AT
L13      930342 S (WELL# OR COMPARTMENT#)/AB
L14          21 S L10 AND (L11 OR L13)
L15      235393 S (APPT# OR APPARATUS)/AB
L16          12 S L8 AND L15 AND (L11 OR L13)
L17          24 S L14 OR L16
L18       32945 S (FUNGI OR FUNGUS)
L19         757 S (FUNGI OR FUNGUS) (L) (DETECT? OR IDENTI?)
L20          20 S L19 AND (L9 OR L15)
L21          17 S L20 NOT L17
L22        1817 S SUSCEPTIBIL? (L) TEST?
L23           0 S (L17 OR L21) AND L22
L24          43 S L8 AND L22
L25        3716 S (ANTIMICROBIAL OR ANTIBIOTIC#) (L) SUSCEPTIBILI?
L26         708 S L25 AND (L17 OR L22)
L27           1 S L25 AND (L17 OR L21)
L28          73 S L8 AND (L22 OR L25)

     FILE 'REGISTRY' ENTERED AT 08:44:24 ON 26 OCT 1998
                 E AMOXICILLIN/CN
L29           1 S E3
                 E CLAVULANIC ACID/CN
L30           1 S E3
L31         122 S 58001-44-8/CRN
L32          93 S 26787-78-0/CRN
L33           7 S L31 AND L32
L34           1 S 79198-29-1
                 E ENROFLOXACIN/CN
L35           1 S E3

     FILE 'HCAPLUS' ENTERED AT 08:47:07 ON 26 OCT 1998
L36        3496 S L29 OR L34 OR L35 OR AMOXICILLIN OR AMOXICILLIN(A) CLAV
L37           6 S L36 AND L28
L38           0 S L19 AND (L22 OR L25) AND L36
L39        5608 S SENSITIVI? (L) (ANTIBIOT? OR ANTIMICROB)
L40        9162 S L39 OR L22 OR L25
L41         124 S L8 AND L40
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L42           6 S L41 AND L36
L43          24 S L8 AND (L9 OR L15) AND (L13 OR L11)
L44          24 S L43 NOT L42
L45       32084 S URINE (L) (ANALYSIS)
L46         492 S L5 AND L45
L47          60 S L46 AND (L9 OR L15)
L48           6 S L47 AND (L11 OR L13)
L49          18 S L46 AND L40
L50           3 S L49 AND L36
L51           6 S L48 NOT L50
L52           2 S L48 NOT (L17 OR L42 OR L43)
L53           3 S L50 NOT (L17 OR L42 OR L43)

=> d .ca l52 1-2;d .ca l53 1-3


L52  ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 1998 ACS
AN   1994:214524  HCAPLUS
DN   120:214524
TI   Malignant cell type markers of the interior nuclear matrix
IN   Toukatly, Gary; Lidgard, Graham P.
PA   Matritech, Inc., USA
SO   PCT Int. Appl., 93 pp.
     CODEN: PIXXD2
PI   WO 9400573 A1  19940106
DS   W:  AU, CA, JP
     RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AI   WO 93-US6160  19930621
PRAI US 92-901701  19920622
DT   Patent
LA   English
AB   The gene and amino acid sequences for two interior nuclear matrix
     proteins (MT1 and MT2) useful as markers of malignant cell types are
     detd.  Primary and secondary structure anal. of the proteins is
     presented as well as means for their manuf. and use in
     clin. assays and cancer therapies (no data).  The levels of MT1 in
     cancerous bladder cells were .apprx.2.5-fold higher than in normal
     cells.  A cDNA for MT1 was cloned by screening a library in
     .lambda.ZAP with monoclonal antibodies and the protein manufd. in
     Escherichia coli as a fusion protein with maltose-binding protein
     using the prior art expression vector pMal-c.  The protein recovered
     from the fusion protein was indistinguishable from that obtained
     from human cells.  The most notable feature of the amino acid
     sequence was a high content of proline with marked clustering in
     pairs and triplets in the N- and C-terminal domains.
IC   ICM  C12N015-12
     ICS  C12N015-11; C12Q001-68; C07K013-00; A61K031-70; A61K037-02;
          A61K039-395; G01N033-577
CC   14-1 (Mammalian Pathological Biochemistry)
     Section cross-reference(s): 3, 9
IT   Blood analysis
     Urine analysis
        (for detn. of interior matrix proteins MT1 and MT2 in diagnosis
        of cancer)
IT   Proteins, specific or class
     RL: BIOL (Biological study)
        (MBP (maltose-binding protein), fusion products, with interior
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matrix protein MT1, chimeric gene for, expression in **Escherichia coli** of)

IT Gene
RL: BIOL (Biological study)
(chimeric, for fusion protein of interior matrix protein MT1 and maltose-binding protein, expression in **Escherichia coli** of)

IT 146706-21-0, Phosphoprotein NuMA (human clone 1F1-2/1F1/1F1-4 nuclear mitotic **apparatus** reduced) 153891-90-8
RL: BIOL (Biological study)
(amino acid sequence of and cloning and expression of cDNA for)

L52 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 1998 ACS
AN 1990:154856 HCAPLUS
DN 112:154856
TI Lower alcohol sulfate wash solution, test kit, and method for the determination of an immunological ligand
IN Warren, Harold Chester, III; Norkus, Norbert Sarunas; Smith-Lewis, Margaret J.
PA Eastman Kodak Co., USA
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
PI EP 328413 A2 19890816
DS R: CH, DE, FR, GB, LI
AI EP 89-301308 19890210
PRAI US 88-155441 19880212
DT Patent
LA English
AB An aq. wash soln. is buffered to a pH of 5-9 and contains .gtoreq.1.5 wt. % of a compd. comprising a C6-10 alc. sulfate anion and an alkali metal cation or NH4+, e.g. Na decyl sulfate. This wash soln. is useful in the detn. of an immunol. ligand, and is not prone to crystn. at lower temps. Particularly, it is useful for washing the immunol. complex formed between the ligand and a receptor mol. therefor. Unreacted materials can be readily sepd. from the complex by the washing, particularly if the sepn. is carried out using a filtration membrane in a test device. A test kit for ligand detn. comprises the wash soln. as **well** as .gtoreq.1 receptors for the ligand, .gtoreq.1 of which is labeled for detection. This kit is particularly useful for measuring human chorionic gonadotropin (hCG) as an early indicator of pregnancy. An ELISA for hCG in urine used styrene copolymer-avidin particles, anti-hCG monoclonal antibody-biotin and -peroxidase conjugates, a leuco dye, and test **wells** contg. microporous nylon filtration membranes. Uncomplexed material was washed away with a soln. contg. 0.1M Na phosphate (pH 7.2), Thiomersal preservative 0.01, and Na decyl sulfate 2.7 wt. %. The wash soln. reduced background to acceptable levels and did not crystallize when subjected to the low-temp. storage test.
IC ICM G01N033-53
ICS G01N033-76; G01N033-543; G01N033-58
CC 9-10 (Biochemical Methods)
Section cross-reference(s): 2
IT **Urine analysis**
(chorionic gonadotropin of human detn. in, by ELISA, wash soln. in)
IT Antigens

RL: PROC (Process)
(of **Streptococcus** group A, detn. of, by ELISA, wash soln. in)
IT **Streptococcus**
(group A, antigens of, detn. of, by ELISA, wash soln. in)
IT Filters and Filtration **apparatus**
(membranes, in immunochem. anal., wash soln. in relation to)

L53 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 1998 ACS
AN 1995:870139 HCAPLUS
DN 124:4378
TI Direct **antimicrobial susceptibility testing** for acute urinary tract infections in women
AU Johnson, James R.; Tiu, Felice S.; Stamm, Walter E.
CS Department Medicine, University Minnesota, Minneapolis, MN, 55455, USA
SO J. Clin. Microbiol. (1995), 33(9), 2316-23
CODEN: JCMIDW; ISSN: 0095-1137
DT Journal
LA English
AB Despite its theor. advantages, direct antimicrobial susceptibility testing (DST) of urine specimens remains controversial largely because of concerns regarding its accuracy, particularly with mixed cultures. To evaluate the performance of DST in the setting of acute urinary tract infection (UTI), the authors performed DST using 25 traditional and contemporary antimicrobial agents on urine specimens from 162 women with suspected acute uncomplicated UTI, and compared these results with the results of standardized disk diffusion susceptibility tests done on the same specimens. Direct test were interpretable for 129 specimens, i.e., 80% of all specimens and 85% of the 152 specimens that met the culture criteria for UTI. Of the 2983 individual comparisons between the direct and std. tests, 0.8% represented very major errors, 0.6% represented major errors, 3.1% represented minor errors, and 95.5% were in agreement. Errors were more common in assocn. with older antimicrobial agents and agents with a high prevalence of antimicrobial resistance, non-Escherichia coli strains, low urine bacterial concns., sparse or mixed growth in the direct test, and the presence of multiple significant organisms in urine. The urine leukocyte concn. was .gtoreq.15/mm3 in all subjects and did not differentiate between specimens that gave an interpretable direct test and those that did not. Calcn. of the sensitivity of DST in identifying antimicrobial resistance supplemented conventional error rate anal. The authors conclude that when used selectively and interpreted carefully, DST of urine specimens offers an efficient, rapid, and accurate method for antimicrobial susceptibility detn. for acute UTI, particularly when the urine bacterial concn. is >105 CFU/mL.
IT **79198-29-1**
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(direct **antimicrobial susceptibility testing** for acute urinary tract infections in women)
CC 9-12 (Biochemical Methods)
Section cross-reference(s): 1, 10, 14

ST urinary tract infection **antimicrobial susceptibility test**
IT **Bacteria**
Bactericide resistance
Bactericides, Disinfectants, and Antiseptics
Escherichia coli
Urine analysis
(direct **antimicrobial susceptibility testing** for acute urinary tract infections in women)
IT 57-92-1, Streptomycin, biological studies 59-01-8, Kanamycin 60-54-8, Tetracycline 67-20-9, Nitrofurantoin 69-53-4, Ampicillin 127-69-5, Sulfisoxazole 153-61-7, Cephalothin 389-08-2, Nalidixic acid 738-70-5, Trimethoprim 1403-66-3, Gentamicin 8064-90-2 32986-56-4, Tobramycin 37517-28-5, Amikacin 51481-65-3, Mezlocillin 61477-96-1, Piperacillin 63527-52-6, Cefotaxime 64221-86-9, Imipenem 69712-56-7, Cefotetan 70458-96-7 72558-82-8, Ceftazidime 78110-38-0, Aztreonam **79198-29-1** 82419-36-1, Ofloxacin 85721-33-1, Ciprofloxacin 86482-18-0
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(direct **antimicrobial susceptibility testing** for acute urinary tract infections in women)

L53 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 1998 ACS
AN 1994:574680 HCAPLUS
DN 121:174680
TI Antibiotic assay of **microorganism** growth and kits for the use thereof
IN Brocco, Silvio
PA Liofilchem S.r.l., Italy
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
PI WO 9416097 A1 19940721
DS W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, VN
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
AI WO 94-IT1 19940103
PRAI IT 93-RM2 19930104
DT Patent
LA English
AB A method to assay a microorganism growth, or a microorganism growth inhibition, in the presence of an effective antibiotic amt., as a function of the pH changes in the culture medium and a color change of a color indicator, is described. The method and the kit therefrom are to be used to assay samples from biol. fluids, water, effluents, etc. Antibiotic assays on urine germs(e.g. Gram neg. bacteria and Gram pos. bacteria) are described.
IT **26787-78-0**, Amoxycillin
RL: BIOL (Biological study)
(urine germs sensitivity to, detn. of)
IC ICM C12Q001-18
ICS C12M001-20
CC 9-12 (Biochemical Methods)
Section cross-reference(s): 10

ST **microorganism** growth antibiotics culture media
IT **Urine analysis**
(**bacteria** growth detn. in, antibiotics effect on)
IT Blood
(culture medium contg., **microorganism** growth detn. in)
IT pH
(detn. of, for **microorganism** growth detn.)
IT **Microorganism** growth
(detn. of, with antibiotics)
IT Antibiotics
(in **microorganism** growth detn.)
IT Staphylococcus
(**sensitivity** of, to **antibiotics**, detn. of)
IT **Bacteria**
(gram-neg., growth of, detn. of, in urine culture, antibiotics effect on)
IT **Bacteria**
(gram-pos., growth of, detn. of, in urine culture, antibiotics effect on)
IT 56-75-7, Chloramphenicol 60-54-8, Tetracycline
RL: BIOL (Biological study)
(Gram neg. **bacteria** sensitivity to, detn. of)
IT 143-74-8, Phenol red
RL: BIOL (Biological study)
(as color indicator in pH detn. for **microorganism** growth detn.)
IT 50-99-7, Glucose, biological studies
RL: BIOL (Biological study)
(culture medium contg., **microorganism** growth detn. in)
IT 12408-02-5
RL: PRP (Properties)
(pH, detn. of, for **microorganism** growth detn.)
IT 66-79-5, Oxacillin 114-07-8, Erythromycin 6998-60-3, Rifamycin 23155-02-4, Phosphomycin 58001-44-8, Clavulanic acid 61036-62-2, Teicoplanin 68373-14-8, Sulbactam
RL: BIOL (Biological study)
(staphylococcus **bacteria** sensitivity to, detn. of)
IT 67-20-9, Nitrofurantoin 69-53-4, Ampicillin 153-61-7, Cephalothin 389-08-2, Nalidixic acid 1403-66-3, Gentamicin 8064-90-2, Co-trimoxazole **26787-78-0**, Amoxycillin 32986-56-4, Tobramycin 37517-28-5, Amikacin 51481-65-3, Mezlocillin 61270-58-4, Cefonicid 61477-96-1, Piperacillin 70458-92-3, Pefloxacin 70458-96-7, Norfloxacin 72558-82-8, Ceftazidime 78110-38-0, Aztreonam 85721-33-1, Ciprofloxacin
RL: BIOL (Biological study)
(urine germs sensitivity to, detn. of)

L53 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 1998 ACS
AN 1984:205940 HCAPLUS
DN 100:205940
TI Head-space/gas-liquid chromatography in clinical microbiology with special reference to the laboratory diagnosis of urinary tract infections
AU Hayward, Nancy J.
CS Bacteriol. Dep., Alfred Hosp., Prahran, 3181, Australia
SO Gas Chromatogr./Mass Spectrom. Appl. Microbiol. (1984), 237-55.
Editor(s): Odham, Goeran; Larsson, Lennart; Maardh, Per-Anders.

Publisher: Plenum, New York, N. Y.
CODEN: 51MKAQ
DT Conference
LA English
AB The use of direct and indirect headspace gas chromatog. is discussed for the detection of neutral and alk. compds. in human urine for the rapid diagnosis of urinary tract infections (e.g., EtOH as marker for Escherichia coli and related species, Me mercaptan, di-Me disulfide, and trimethylamine as markers for Proteus species). Same-day headspace gas chromatog. and antibiotic susceptibility tests by using the method are also discussed.
IT **26787-78-0**
RL: ANST (Analytical study)
(**bacteria** susceptibility to, detn. of, by headspace gas chromatog.)
CC 9-3 (Biochemical Methods)
Section cross-reference(s): 10, 14
ST clin microbiol headspace gas chromatog; urinary tract infection gas chromatog; **antibiotic bacteria susceptibility** gas chromatog
IT **Urine analysis**
(alk. and neutral org. compds. detection in, of humans by headspace gas chromatog., for urinary tract infection diagnosis)
IT **Antibiotics**
(**bacteria susceptibility** to, detn. of, by headspace gas chromatog.)
IT **Escherichia coli**
Proteus (bacterium)
(urinary tract of humans infection with, diagnosis of, by headspace gas chromatog.)
IT **26787-78-0**
RL: ANST (Analytical study)
(**bacteria** susceptibility to, detn. of, by headspace gas chromatog.)
IT 64-17-5, **analysis** 71-23-8, **analysis** 71-36-3, **analysis** 74-93-1, **analysis** 75-50-3, **analysis** 624-92-0
RL: ANT (Analyte); ANST (Analytical study)
(detection of, in **urine** of humans by headspace gas chromatog., for urinary tract infection diagnosis)

=> fil wpids

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                DEL HIS Y
L1          92086 S BACTER? OR ORGANISM? OR MICROORGANIS?
L2         700405 S DETECT? OR IDENTI?
L3           6501 S L1 (L) L2
L4          14309 S E COLI OR ESCHERICHIA  COLI OR KLEBSIELLA OR ENTEROBACT
L5           8716 S L4 (L) (L1 OR L2)
L6          14376 S L3 OR L5
L7         783524 S APPARATUS OR APPT#
L8            660 S L6 AND L7
L9         248938 S WELL# OR COMPARTMENT#
L10        647108 S L9 OR CHAMBER#
L11           115 S L8 AND L10
L12         97975 S L1 OR L4
L13          5499 S L12 (L) (DETERM? OR DETN)
L14           410 S L7 AND L13
L15            84 S (L9 OR CHAMBER#) AND L14
L16           155 S L11 OR L15
L17            80 S (ANTIBIOTIC? OR ANTIMICROB?) (L) (SENSIVIT? OR SUSCEPTI
L18           778 S (ANTIBIOTIC? OR ANTIMICROB?) (L) (SENSITIV? OR SUSCEPTI
L19             5 S L18 AND L16
L20            68 S L16 AND L7/TI
L21             5 S L20 AND (ANTIBIOT? OR ANTIMICROB?)
L22           156 S AMOXICILLIN OR CLAVULONIC ACID OR ENROFLOXACIN
L23           205 S CLAVULANIC ACID
L24           355 S L22 OR L23
L25             0 S L16 AND L24
L26            12 S L18 AND L24
L27             0 S L7 AND L26
                  E URINALYSIS
                  E URINANAYSIS
L28           129 S URINE ANALYSIS OR UROPATHOGEN# OR URO PATHOGEN#
L29             4 S L28 AND L6
L30             1 S L29 AND L7
L31           885 S L14 OR L8
L32            26 S L31 AND L18
L33             0 S L32 AND L24
L34             8 S L19 OR L21 OR L30
L35            21 S L32 NOT L34

     FILE 'WPIDS' ENTERED AT 09:43:44 ON 26 OCT 1998

=> d .wp l34 1-8;d .wp l35 1-21


L34  ANSWER 1 OF 8  WPIDS   COPYRIGHT 1998 DERWENT INFORMATION LTD
AN   98-297962 [26]    WPIDS
DNN  N98-233026        DNC C98-093007
TI   Automated microbiological assay apparatus - uses
     electromagnetic waveform energy monitored by linear colour sensor
     which generates signal encoding colorimetric data.
DC   B04 D16 J04 S03 S05 T01
IN   GIBBS, D L; HSIA, W; WANG, Q
PA   (GILE-N) GILES SCI INC
CYC  77
```

PI WO 9821360 A1 980522 (9826)* EN 32 pp
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
AU 9749089 A 980603 (9842)
ADT WO 9821360 A1 WO 97-US18882 971022; AU 9749089 A AU 97-49089 971022
FDT AU 9749089 A Based on WO 9821360
PRAI US 96-746734 961115
AB WO 9821360 A UPAB: 980701
New microbiological assay **apparatus** uses electromagnetic waveform energy (16,18). A microbiological assay tray (14), including an array of reaction **wells**, is held by a support (10) in a location relative to the source. A linear light sensor (20,22,24) is fixed relative to the support, and hence the tray, for receiving electromagnetic waveform radiation emanating from a linear array of the **wells** in response to the waveform energy from the source during a scanning of the **wells**. The sensor generates a signal encoding colorimetric data pertaining to a series of samples lying along a line intersecting the array of **wells**. A computer or digital processor is connected to the sensor. It is programmed to analyse the colorimetric data to **determine** the existence of possible colour changes in the **wells** resulting from chemical reactions.
USE - The **apparatus** may be used for **identification** of **microorganisms** in samples, and for **antibiotic susceptibility** of samples.
ADVANTAGE - The results are achieved rapidly, obviating visual examination. The **apparatus** also minimises the use of motors or other moving parts.
Dwg.1/5

L34 ANSWER 2 OF 8 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 97-119061 [11] WPIDS
DNC C97-038499
TI Two-part **appts**. for acquiring and testing body fluid sample - has test unit including reagents sealed in tube punctured by probe carrying sample and movable between selected test positions.
DC B04 D13 D16 J04
IN SKIFFINGTON, R; ZOMER, E
PA (CHAR-N) CHARM SCI INC
CYC 20
PI WO 9703209 A1 970130 (9711)* EN 59 pp
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AU CA JP US
AU 9647568 A 970210 (9724)
EP 861330 A1 980902 (9839) EN
R: BE DE DK FR GB NL SE
ADT WO 9703209 A1 WO 96-US524 960102; AU 9647568 A AU 96-47568 960102, WO 96-US524 960102; EP 861330 A1 EP 96-903494 960102, WO 96-US524 960102
FDT AU 9647568 A Based on WO 9703209; EP 861330 A1 Based on WO 9703209
PRAI US 95-7585 951127; US 95-1081 950712
AB WO 9703209 A UPAB: 970313

A test **appts**. comprises a sample unit and a test unit. The sample unit comprises a probe (18) used to obtain a test sample, and a sterile **chamber** (14) with a cover (12). The probe is held in the **chamber** prior to use in one position and is movable longitudinally in the **chamber** between sequential non-use, use and non-use positions. A tubular test unit (16) is longitudinally aligned with and attached to one end of the **chamber** (14). It comprises a transparent reagent housing suitable for **identification** of the test sample by colour or luminescence. The reagent is contained in a sealed package having a puncturable membrane penetrated by the longitudinal movement of the probe.

USE - The **appts**. is used for testing body fluids, e.g. blood, urine, milk and food, e.g. fruit and vegetables, and to **detect** alkaline phosphatase, salmonella, drugs and **antibiotics**, e.g. sulpha drugs, beta -lactam drugs, organophosphates, carbamates and active metabolites, various **bacteria** and pathogenic combinations, either in materials or on their surface. In a specific example, alkaline phosphatase is tested for on a processing surface to ensure it is hygienically clean using a bioluminescent type test.

ADVANTAGE - The device is simple yet effective. It can be used by non-specialist personnel in the field, does not require separate pipettes and test tubes, and does not require crushing of glass ampoules with the associated hazards. The reagents are stable and may be stored for long periods prior to use.

Dwg.3/8

L34 ANSWER 3 OF 8 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 92-391675 [48] WPIDS
DNN N92-298758 DNC C92-173711
TI **Appts**. for analysing cells in urine for classification of blood cells - by irradiating stained cells with light to give measured light scattering and fluorescence emitted by their DNA.
DC B04 D16 J04 S03
IN NAKAMOTO, H; OKADA, T
PA (TOAM-N) TOA MEDICAL ELECTRONICS CO LTD; (TOAI-N) TOA IYO DENSHI KK
CYC 9
PI EP 515099 A1 921125 (9248)* EN 24 pp
R: DE FR GB IT NL
AU 9216225 A 921119 (9302)
CA 2068480 A 921115 (9306)
JP 05322885 A 931207 (9402) 16 pp
US 5325168 A 940628 (9425) 20 pp
EP 515099 B1 970820 (9738) EN 25 pp
R: DE FR GB IT NL
DE 69221668 E 970925 (9744)
ADT EP 515099 A1 EP 92-304368 920514; AU 9216225 A AU 92-16225 920513; CA 2068480 A CA 92-2068480 920512; JP 05322885 A JP 91-108045 910514; US 5325168 A US 92-882305 920513; EP 515099 B1 EP 92-304368 920514; DE 69221668 E DE 92-621668 920514, EP 92-304368 920514
FDT DE 69221668 E Based on EP 515099
PRAI JP 91-108045 910514
AB EP 515099 A UPAB: 931116
Appts. for analysing cells in urine comprises a **detector** which irradiates with light a constricted zone through which various cells contained in a urine specimen flow in

single file. The cells have been proviously stained so that DNA will specifically emit fluorescence when irradiated with the light. The scattered and fluorescent light are **detected**. The various cells in the specimen are classified and enumerated based on the scattered and fluorescent light **detected**.

The circuitry includes a first photoelectric converting circuit which converts the scattered **detected** light into an electrical signal output, and a second similar circuit producing an electrical signal output from the **detected** fluorescent light. Information data is produced from the two output signals. Pulse-width and cell-dia. data are calculated from the scattered light information data.

The **appts**. includes a memory contg. a store of information concerning cell-dia. scattered light intensity and fluorescent light intensity derived from measurements carried out previously on known samples. The data from the urine specimen to be analysed is compared with the stored information and the calculated results of cell classification and counts are displayed.

USE/ADVANTAGE - Besides **detected** DNA in a urine specimen, the **appts**. can classify and enumerate erythrocytes, leukocytes, epithelia cells, casts and **bacteria**. A large volume of urine can be analysed enabling more precise analysis of the cells. The process is fully automated allowing rapid and cheap analysis.

1/14
on
Dwg.1/14

L34 ANSWER 4 OF 8 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 86-233929 [36] WPIDS
DNN N86-174587 DNC C86-100606
TI Micro-biological testing **appts**. - with test trays transported as desired from incubation **chamber** to inspection station.
DC B04 D16 J04 Q35 S03 S05
IN COHN, S G; COX, C O; FARBER, G L; HEGEMANN, M K; NAVARRO, M C; COX, O; HEGEMANN, MK
PA (SHES) SHERWOOD MEDICAL CO
CYC 9
PI EP 193385 A 860903 (8636)* EN 50 pp
R: BE DE FR GB IT NL
JP 61247373 A 861104 (8650)
JP 61247374 A 861104 (8650)
US 4720463 A 880119 (8805)
US 4724215 A 880209 (8809)
US 4817785 A 890404 (8916)
US 4856073 A 890808 (8939)
CA 1273554 A 900904 (9041)
CA 1273555 A 900904 (9041)
EP 193385 B1 920722 (9230) EN 32 pp
R: BE DE FR GB IT NL
DE 3686067 G 920827 (9236)
ADT EP 193385 A EP 86-301357 860226; JP 61247373 A JP 86-37165 860220; JP 61247374 A JP 86-37164 860220; US 4720463 A US 85-707339 850301; US 4724215 A US 85-706068 850227; US 4817785 A US 87-118382 871106; US 4856073 A US 87-118917 871110; EP 193385 B1 EP 86-301357 860226; DE 3686067 G DE 86-3686067 860226, EP 86-301357 860226

FDT DE 3686067 G Based on EP 193385
PRAI US 85-706068 850227; US 85-707339 850301; US 87-118382 871106
AB EP 193385 A UPAB: 930922
Number of microbiological test trays, each having a no. of **wells**, are accommodated in an incubation **chamber**.
A transport system is provided for transporting any predeterd. test tray as required from the incubation **chamber** to an inspection station where the image of the test tray is processed to **determine** the test results.
USE/ADVANTAGE - In microbiological testing where **organisms** in test **wells** or cupules on trays or strips are incubated and a **microorganism** is **identified** or its **susceptibility** to **antimicrobial** agents is **determined**. Automation of test procedure from incubation through to the reading of the test tray, eliminates the need for highly trained technicians to interpret the results. The **appts**. is flexible and economical in use.
0/15

L34 ANSWER 5 OF 8 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 80-90040C [50] WPIDS
TI Automated inoculator **appts**. - in which multiple pin inoculator head is dipped into sample tray then lowered into test tray.
DC D16
IN BOXER, L; HOWARD, J F; TOLOSA, F P
PA (DYNA-N) DYNATECH LABS INC
CYC 1
PI US 4235971 A 801125 (8050)*
PRAI US 76-680450 760426; US 78-914131 780609
AB US 4235971 A UPAB: 930902
A sample is held in a reservoir tray beneath an inoculation head which carries depending pins. The pins are dipped into the sample and moved by a carriage to overlie **wells** in a depositing test tray. The head is again lowered to inoculate the test tray. Finally the head is moved to a sterilisation station which includes a heated **chamber** into which the pins are lowered. Pref. the horizontal movement of the head between the stations is faster than the vertical reciprocation of the head at each station. Pref., the number and position of the pins are the same as that of the **wells** in the test tray.
Typically there are 96 **wells** in the test tray contg. different concs. of an **antibiotic** and the **appts**. is used to **determine** the concs. to which a sample **organism** is susceptible.

L34 ANSWER 6 OF 8 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 76-41761X [22] WPIDS
TI **Antibiotic susceptibility** testing of clinical specimen - transferred to test **wells** in cartridge holding culture medium and **antibiotic**.
DC B04 D16 J04 S03 S05
PA (MCDD) MCDONNELL DOUGLAS CORP
CYC 13
PI US 3957583 A 760518 (7622)*
BE 839465 A 760913 (7640)

DE 2609951 A 770915 (7738)
BR 7601476 A 770906 (7739)
NL 7602699 A 770919 (7740)
NO 7600728 A 771003 (7743)
SE 7603183 A 771010 (7743)
FI 7600632 A 771031 (7746)
GB 1492353 A 771116 (7746)
DK 7601094 A 771107 (7748)
FR 2344840 A 771118 (7802)
CA 1051328 A 790327 (7914)
IT 1121653 B 860410 (8730)
PRAI US 74-528840 741202
AB US 3957583 A UPAB: 930901
A cartridge contains a number of individual **wells** linked by passages to a filling port. A clinical specimen is introduced into the filler port and fills the **wells** which are each provided with an overflow cavity to collect air bubbles during the filling operation. The cartridge is transparent and prior to use a pref. freez-dried culture medium is placed in each **well** so that **microorganism** growth within a **well** can be **detected** optically. Known quantities of **antibiotics** are introduced into some of the **wells** while one **well** contains no **antibiotic**. After filling the cartridge with the specimen it is incubated and the **wells** are examined for growth. The **apparatus determines** the **susceptibility** of **microorganism** to an **antibiotic** without isolating the **microorganism**. The culture medium will only support the required **microorganism** and the effectiveness of the **antibiotics** is **detected** by comparing the growths in the **antibiotic**-free **well** with the remainder. **Determination** of the effective **antibiotic** concentration is faster than previously.

L34 ANSWER 7 OF 8 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 75-80535W [49] WPIDS
TI **Determining sensitivity** of **bacteria** to **antibiotics** - by comparing the light-scattering props. of treated and untreated samples.
DC B04 D16 S03 S05
PA (SCSP-N) SCIENCE SPECTRUM
CYC 4
PI DE 2521025 A 751127 (7549)*
US 3928140 A 751223 (7601)
GB 1515681 A 780628 (7826)
CA 1034787 A 780718 (7831)
US 4101383 A 780718 (7840)
PRAI US 74-468992 740510; US 75-640195 751212
AB DE 2521025 A UPAB: 930831
The **sensitivity** of microparticles (I) to environmental influences, is **determined** by (i) placing a control sample of (I) in the path of a thin, practically monochromatic beam of electromagnetic radiation; (ii) measuring the intensity of scattered radiation for a number of angles of the sample relative to the beam axis so as to give a differential control scattering plot (DCSP); (iii) the test sample, which has been subjected to the effect to be examined, is then measured in the same way to give a differential

test scattering plot (DTSP); (iv) DTSP is displaced along a chosen axis relative to DCSP until the algebraic sum of the areas between them is a minimum, and (v) the 2 plots are compared to **determine** a relative difference which is a measure of the **sensitivity** of (I) to the environmental change. An **appts.** for this method is also claimed. Specif., for examining response of **bacteria** to **antibiotics;** (I) may also be mammalian cells, viruses, **antibiotics** etc. The method **detects** changes in shape and size of (I) as **well** as change in number.

L34 ANSWER 8 OF 8 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 66-22805F [00] WPIDS
TI Method and **apparatus** for determining the sensitivity of.
DC B00
PA (DENV) DENVER CHEMICAL MANUFACTURING CO
CYC 1
PI US 3272719 A (6800)*
PRAI US 64-387933 640806
AB US 3272719 A UPAB: 930831
(A) A method for **determining** the **sensitivity** of pathogens in infected body fluids to the action of various drugs in varied concentrations simultaneously which comprises providing a container made of a flat plate having a plurality of adjacent isolated open top **compartments**, each **compartment** containing sterile nutrients and different known concns. of a drug under test, saturating a narrow elongated strip of bibulous material with a sample of infected body fluid, laying said saturated strip across a plurality of said **compartments** and at each **compartment** permitting said strip to sag into said nutrient, covering and incubating the treated container, and after incubation counting the **bacterial** colonies in each **compartment.**

(B) **Apparatus** for use in above test comprising a plate having on its upper surface a series of adjacent shallow pools separated by partitions, certain of the partitions being provided on their upper edges with means to receive said bibulous strip and prevent the inadvertent lateral displacement thereof.

Typically in the treatment of urinary tract infections where it is important to know the character of the infecting **organism** and its **sensitivity** to the various **antimicrobial** agents available.

L35 ANSWER 1 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 98-296764 [26] WPIDS
CR 97-077758 [07]
DNC C98-092433
TI **Determining antibiotic sensitivity** of non-paraffinophilic **microorganisms** - by observing **microorganism** growth on a slide to which carbon source is bound in presence of **antibiotic.**

DC B04 D16
IN FELDER, M S; OLLAR, R
PA (INFE-N) INFECTECH INC
CYC 1
PI US 5750363 A 980512 (9826)* 8 pp
ADT US 5750363 A CIP of US 95-528192 950914, US 97-858131 970519
FDT US 5750363 A CIP of US 5663056
PRAI US 97-858131 970519; US 95-528192 950914
AB US 5750363 A UPAB: 980701
Determination of the **antibiotic sensitivity** of a non-paraffinophilic **microorganism** (NPM) in a specimen obtained from a patient) to an **antimicrobial** agent (AMA), comprises: (a) providing a receptacle containing an aqueous solution that does not contain a carbon source; (b) inoculating the solution with the specimen; (c) placing into the receptacle (i) a slide to which a carbon source is bound and (ii) a predetermined quantity of an AMA; and (d) observing NPM growth (or lack of growth) on the slide to **determine** if the predetermined quantity of AMA is effective in inhibiting growth of the NPM on the slide. Also claimed is an **apparatus** for **determining** the **sensitivity** of a NPM in a specimen obtained from a patient to an AMA, comprising: (a) a receptacle adapted to contain (i) an aqueous solution that does not contain a carbon source, (ii) an amount of the AMA to be tested and (iii) the specimen; and (b) a slide to which a carbon source is bound.

USE - The process may be used to **determine** the **sensitivity** of NPMs (e.g. Mycobacterium tuberculosis, Mycobacterium leprae, Staphylococcus, **Streptococcus**, **E. coli**, Listeria, Brucellae, Humemophilus, Treponema, Pneumococcus, Clostridium, Cryptococcus, Coccidiodes, Histoplasma, **Klebsiella** pneumoniae, Shigella spp., Salmonella spp. or Helicobacter pylori) to AMAs.

ADVANTAGE - The process and **apparatus** give an efficient and economical way of **determining** the **sensitivity** of the NPM to AMAs.

Dwg.0/1

L35 ANSWER 2 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 97-212915 [19] WPIDS
DNC C97-068833
TI Automatic testing **appts.** for the **antibiotic sensitivity** of a paraffinophilic microorganism - is useful for monitoring the growth of Mycobacterium avium-intracellulare in acquired immunodeficiency syndrome patients.
DC B04 D16
IN FELDER, M S; OLLAR, R; OLLAR, R A
PA (INFE-N) INFECTECH INC
CYC 72
PI WO 9712056 A1 970403 (9719)* EN 24 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN
US 5637501 A 970610 (9729) 10 pp
AU 9673599 A 970417 (9732)

US 5726030 A 980310 (9817) 10 pp
EP 854932 A1 980729 (9834) EN
R: AT BE CH DE DK ES FI FR GB GR IE IT LI NL PT SE
ADT WO 9712056 A1 WO 96-US14475 960910; US 5637501 A US 95-535873 950928; AU 9673599 A AU 96-73599 960910; US 5726030 A Div ex US 95-535873 950928, US 96-673877 960702; EP 854932 A1 EP 96-935805 960910, WO 96-US14475 960910
FDT AU 9673599 A Based on WO 9712056; US 5726030 A Div ex US 5637501; EP 854932 A1 Based on WO 9712056
PRAI US 95-535873 950928; US 96-673877 960702
AB WO 9712056 A UPAB: 970512
The **sensitivity** of a paraffinophilic **microorganism** to concns. of different **antimicrobial** agents, is automatically tested by: (a) placing a liq. medium, **antimicrobial** agent and the **microorganism** in 1 of a series of receptacles; (b) placing a slide contg. paraffin coating in each receptacle; (c) incubating them; (d) automatically monitoring sequentially the extent of growth on the slides using a light scatter sensor, and (e) **determining** which agent concn. is effective to resist microbial growth using the results obtd.

The light scatter sensor comprises a nephelometer which is used to **determine** a min. concn. level and a min. **bactericidal** concn., esp. using a display screen to provide a visual readout which is a function of **microorganism** growth of each slide w.r.t. a negative control slide also used in the testing. Output information is supplied using a computer, cathode ray tube and/or hard copy.

USE - The process is useful for expediting information w.r.t. a more rapid and effective treatment of a patient, esp. Mycobacterium avium-intracellulare in AIDS patients.

ADVANTAGE - The system is automated, cost-effective and adapted to be used by relatively unskilled laboratory personnel.

Dwg.0/7

L35 ANSWER 3 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 97-077760 [07] WPIDS
DNC C97-025046
TI **Determining sensitivity** of paraffinophilic **microorganisms** to **antimicrobial** agents - by addn. of slides coated with paraffin to a receptacle contg. sample to be tested, and **determining** growth of **microorganisms** on the slides.
DC B04 C07 D16
IN FELDER, M S; OLLAR, R; OLLAR, R A
PA (INFE-N) INFECTECH INC
CYC 75
PI ZA 9602161 A 961129 (9707)* 17 pp
WO 9717424 A1 970515 (9725) DE 16 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN
AU 9671177 A 970529 (9737)
US 5801009 A 980901 (9842)

ADT ZA 9602161 A ZA 96-2161 960318; WO 9717424 A1 WO 96-US15317 960925; AU 9671177 A AU 96-71177 960925; US 5801009 A Div ex US 95-555736 951109, US 97-897815 970721
FDT AU 9671177 A Based on WO 9717424
PRAI US 95-555736 951109; US 97-897815 970721
AB ZA 9602161 A UPAB: 970212
Determining the **sensitivity** of at least1 paraffinophilic **microorganism** (PM), from a specimen obtd. from a patient, to different **antimicrobial** agents and predetermined quantities of these, comprises:
(a) providing at least1 receptacle contg. an aq. soln.;
(b) adjusting the soln. to mimic the in vivo clinical conditions of the patient;
(c) inoculating the soln. with the specimen;
(d) placing a paraffin-coated slide to bait the PMs and a predetermined quantity of an **antimicrobial** agent into the receptacle, and
(e) observing the growth (or lack of growth) of the PM on the slide to **determine** whether the predetermined quantity of the **antimicrobial** agent is effective in inhibiting growth of the PM on the slide.
Also claimed are **appts**. for the above method.
USE - The process is useful for **determining** the **antimicrobial** agent **sensitivity** of PMs such as Micrococcus paraffinae, Corynebacterium simplex, Mycobacterium hyalinum, Mycobacterium avium intracellulare (MAI), Actinomyces, Candida tropicalis, Aspergillus flavus, Pseudomonas fluorescens liquefaciens or P. aeruginosa. It may therefore be used for **determining** agents (and amts. of these) useful in human and veterinary medicine.
ADVANTAGE - The process is efficient and economical.
Dwg.1/1

L35 ANSWER 4 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 97-077758 [07] WPIDS
CR 98-296764 [26]
DNC C97-025044
TI **Determining sensitivity** of non-paraffinophilic **microorganisms** to **antimicrobial** agents - by addn. of slides coated with carbon source to receptacle contg. sample to be tested, and **determining** growth of the **microorganisms** on the slides.
DC B04 C07 D16
IN FELDER, M S; OLLAR, R; OLLAR, R A
PA (INFE-N) INFECTECH INC
CYC 73
PI ZA 9602159 A 961129 (9707)* 14 pp
WO 9710357 A1 970320 (9718) EN 13 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN
AU 9668547 A 970401 (9730)
US 5663056 A 970902 (9741) 6 pp
US 5677169 A 971014 (9747) 5 pp
EP 853677 A1 980722 (9833) EN

R: AT BE CH DE DK ES FI FR GB GR IE IT LI NL PT SE
ADT ZA 9602159 A ZA 96-2159 960318; WO 9710357 A1 WO 96-US13549 960823; AU 9668547 A AU 96-68547 960823; US 5663056 A US 95-528192 950914; US 5677169 A Div ex US 95-528192 950914, US 96-620713 960321; EP 853677 A1 EP 96-928978 960823, WO 96-US13549 960823
FDT AU 9668547 A Based on WO 9710357; US 5677169 A Div ex US 5663056; EP 853677 A1 Based on WO 9710357
PRAI US 95-528192 950914; US 96-620713 960321
AB ZA 9602159 A UPAB: 980701
Determining the **sensitivity** of at least 1non-paraffinophilic **microorganism** (NPM) from a specimen obtd. from a patient, to different quantities of **antimicrobial** agents, comprises:
(a) providing at least 1 receptacle contg. an aq. soln.;
(b) inoculating the soln. with the specimen;
(c) placing a slide coated with a carbon source and a predetermined quantity of an **antimicrobial** agent into the receptacle, and
(d) observing growth (or lack of growth) of the NPM on the slide to **determine** whether the predetermined quantity of the **antimicrobial** agent is effective in inhibiting the growth of the NPM on the slide.
Also claimed is **appts**. for the method as above.
USE - The process is useful for **determining** the **antimicrobial** agent **sensitivity** of NPMs such as Mycobacterium tuberculosis, **E. coli**, Listeria, Pneumococcus, Brucella, Clostridium, Coccidioides, **Streptococcus**, Staphylococcus or Histoplasma. It may therefore be used for **determining** agents (and the amts. of these) which will be useful in human and veterinary medicine.
ADVANTAGE - The process is efficient and economical.
Dwg.1/1

L35 ANSWER 5 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 96-499321 [50] WPIDS
DNC C96-156066
TI **Identification** of **bacterial** cultures by automatic measurements - and **determn.** of their **sensitivity** to **antibiotics** using optical density analysis.
DC B04 D16
IN BAJARD, J
PA (SNFI) PASTEUR SANOFI DIAGNOSTICS; (SNFI) PASTEUR SANOFI DIAGNOSTICS SA
CYC 22
PI EP 742284 A2 961113 (9650)* FR 36 pp
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
FR 2733996 A1 961115 (9702) 35 pp
ZA 9603734 A 970129 (9710) 79 pp
CA 2176324 A 961113 (9711) FR
JP 09117300 A 970506 (9728) 98 pp
AU 9652215 A 971106 (9802)
ADT EP 742284 A2 EP 96-440034 960429; FR 2733996 A1 FR 95-5817 950512; ZA 9603734 A ZA 96-3734 960510; CA 2176324 A CA 96-2176324 960510; JP 09117300 A JP 96-151462 960510; AU 9652215 A AU 96-52215 960513
PRAI FR 95-5817 950512
AB EP 742284 A UPAB: 961211

Process for the **identification** of **bacterial** cultures and **determn.** of their **sensitivity** to **antibiotics** is new.
A known vol. of **bacterial** culture is placed manually in each of several prim. containers (101) where it disperses in a liq. to form a pre-calibrated inoculum. All or part of this inoculum is transferred (101') to measuring containers where **identification** (104) and/or **determn.** of **sensitivity** (105) occurs. The inoculum may be allowed to undergo a pre-culture phase to bring it to a state of rapid cell division before spreading into cavities in the container contg. reagents. The containers are then incubated, during and after which time cell density in the cavities is measured and stored on computer (108). This data can be used to characterise the growth of **bacteria** in the inoculum, their **identification** and **sensitivity** to **antibiotics**.
Also claimed is **appts.** for carrying out the method.
ADVANTAGE - Once the **bacterial** cultures are introduced to the machine, there is no further manual intervention and rapid evaluations can be carried out.
Dwg.2/29

L35 ANSWER 6 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 96-496897 [49] WPIDS
CR 91-164216 [22]; 94-176265 [21]; 96-029815 [03]; 97-235569 [20]
DNC C96-155241
TI **Appts.** for **determining sensitivity** of Mycobacterium avium-intracellulare to **antimicrobial** agents - comprises test-tubes contg. agent and Mycobacterium avium-intracellulare complex **organisms** to be assayed, and paraffin-coated slides in the test-tubes.
DC B04 D16
IN OLLAR, R
PA (INFE-N) INFECTECH INC
CYC 1
PI US 5569592 A 961029 (9649)* 8 pp
ADT US 5569592 A CIP of US 89-426573 891024, Div ex US 92-841937 920225, US 92-900275 920618
FDT US 5569592 A CIP of US 5153119, Div ex US 5316918
PRAI US 92-841937 920225; US 89-426573 891024; US 92-900275 920618
AB US 5569592 A UPAB: 980202
Appts. for **determining** the **sensitivity** of Mycobacterium avium-intracellulare (MAI) to different **antimicrobial** agents and their concns. comprises: (a) a series of test-tubes contg. different amts. of the **antimicrobial** agent to be tested and MAI complex **organisms** to be assayed; and (b) paraffin-coated slides that can be placed in the test-tubes.
USE - The **appts.** is used to **detect** the presence/absence of MAI in a specimen. MAI infections are a characteristic of at least 50% of AIDS patients.
ADVANTAGE - The presence or absence of growth of MAI **organisms** on the slides can be used to **determine** efficiently and economically the concn. of the **antimicrobial** agent necessary to inhibit this growth. The **appts.** is easy to use and does not require specialised training for a person to operate it. The method also reduces the risk of contamination.

Dwg.0/7

L35 ANSWER 7 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 96-259062 [26] WPIDS
CR 97-043154 [04]
DNN N96-217998 DNC C96-081965
TI Device for **detecting microorganisms**, e.g. in clinical sample - uses deformation of piezoelectric device in response to pressure changes in culture vessel due to gaseous metabolite prodn..
DC B04 D16 J04 V06
IN DIGUISEPPI, J L; THORPE, T C; TURNER, J E
PA (ALKU) AKZO NV
CYC 1
PI US 5518895 A 960521 (9626)* 20 pp
ADT US 5518895 A CIP of US 90-480398 900215, Cont of US 92-847118 920306, Cont of US 93-92537 930714, US 95-410374 950324
FDT US 5518895 A CIP of US 5094955
PRAI US 92-847118 920306; US 90-480398 900215; US 93-92537 930714; US 95-410374 950324
AB US 5518895 A UPAB: 981008
A device for **detecting microorganisms** (MO) in a specimen comprises a sealable container in which the specimen can be cultured in a medium. A deformable seal communicates with a piezoelectric (PE) **appts**. Measurable electric signals are produced as the seal and PE **appts**. deform from changes in the pressure in the container caused by metabolic activity of MO. The signals are received in a processor, which **determines** the pressure changes and **detects** any change in the rate of change of pressure, to **detect** MO growth. A similar device for continuously monitoring biological activity in a specimen comprises a sealable container in which the specimen can be cultured in a medium. The seal is pierced by a sensor consisting of a hollow piercing part, connected via a deformable section to a PE device. Deformation of the deformable part of the sensor by pressure changes in the piercing part gives electrical signals from the PE device. The signals are processed to **detect** the growth of MO as before. Methods for monitoring MO growth in a specimen using the devices are also claimed.

USE - A wide range of MO (typically the Gram negative **bacterium Escherichia coli**, the Gram positive **bacterium** S. pyogenes, the Gram negative non-fermenting **bacterium** Pseudomonas aeruginosa, the anaerobic **bacterium** B. fragilis and the yeast Candida albicans) can be **detected** in clinical specimens. The **susceptibility** of MO to **antibiotics** can also be tested.

ADVANTAGE - MO can be **detected** in the presence of interfering materials (e.g. a large concn. of red blood cells), by a non-radiometric and non-invasive method. Since all **organisms** produce CO2 in the course of their metabolism, a very broad spectrum of MO can be **detected**. Very low MO concns. (e.g. one **organism** per ml) can be **detected** by using long incubation times (e.g. 7 days). The sensor may be disposable. Measurements can be made from outside the culture vessel, i.e. the integrity of the vessel need not be violated. Opaque or coloured components of the specimen have no effect.

Dwg.7A,7B/8

L35 ANSWER 8 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 94-202509 [25] WPIDS
DNN N94-159286 DNC C94-092408
TI **Sensitivity** of microorganisms to **antimicrobial** agents - uses caliper used to measure the dia. of inhibition zones indicates **sensitivity** to different agents via coloured areas and associated markers.
DC B04 D16 J04 S02
IN BONACORSI, S
PA (SNFI) PASTEUR SANOFI DIAGNOSTICS
CYC 1
PI FR 2698702 A1 940603 (9425)* 12 pp
ADT FR 2698702 A1 FR 92-14525 921202
PRAI FR 92-14525 921202
AB FR 2698702 A UPAB: 961111
Appts. for reading the **sensitivity** of **microorganisms** to **antimicrobial** agents by diffusion in solid medium a caliper (1) comprises a runner(2) with a prim lateral lip(5) recessed in a slide(3) with sec. lateral lip(22) allowing measurement of the dia. (d1) of inhibition zones of **microorganisms** by different **antimicrobial** agents.
The runner(2) has at least one area(8-12) within which a number of **antimicrobial** agents are indicated, and the slide(3) has markers(8A-12A-8B-12B) on either side of the slide(2) corresponding to the areas(8-12) disposed such that when the caliper (1) is opened the position of a marker w.r.t. the zone of a specific **antimicrobial** agent indicates the **sensitivity** of the **microorganism** to that agent.
USE/ADVANTAGE - **Determination** of **sensitivity** of **microorganisms** to **antimicrobial** agents. (claimed). Rapid simple procedure. Clear indication of results. Single stage operation. Variable number of **antimicrobial** agents can be used.
Dwg.1/2

L35 ANSWER 9 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 94-176265 [21] WPIDS
CR 91-164216 [22]; 96-029815 [03]; 96-496897 [49]; 97-235569 [20]
DNC C94-080674
TI **Determining sensitivity** of Mycoplasma avium-intracellulaire to different **antimicrobial** agents - using test tube contg. agent and **organisms** and paraffin coated slide, upon which **organisms** grow.
DC B04 D16
IN OLLAR, R A
PA (INFE-N) INFECTECH INC
CYC 1
PI US 5316918 A 940531 (9421)* 9 pp
ADT US 5316918 A CIP of US 89-426573 891024, US 92-841937 920225
FDT US 5316918 A CIP of US 5153119
PRAI US 92-841937 920225; US 89-426573 891024
AB US 5316918 A UPAB: 980202
Method of testing the **sensitivity** of Mycobacterium avium-intracellulaire (MAI) complex to different **antimicrobial** agents and dosage concns. comprises: (a)

providing test tubes contg. an amt. of an agent to be tested and MAI complex to be assayed, (b) placing a paraffin coated slide into each tube, (c) incubating the test tubes and (d) observing the growth of MAI complex on the slides at time intervals, where the MIC of the agent can be determined.

USE/ADVANTAGE - The method allows the determn. of the **sensitivity** of MAI to different **antimicrobial** agents. The **appts.** is easy to use and inexpensive, and the method is accurate and efficient.

0.5 ml of infectious inoculum was added to each of tubes (111-115). The initial working **antimicrobial** soln., the paraffin coated slides (131-135) and 4.5 ml of Czapek broth were also added. A control tube (110) contained 0.5 ml of infectious inoculum, 0.5 ml of normal saline and 4.5 ml of Czapek broth, and a paraffin-coated slide. Each tube (111-115) contained increasing concns. of **antimicrobial** agent. Tube (111) contained 3.6 microg/nml, (112) contained 7.3 microg/ml, (113) contained 10.9 microg/ml;, (114) contained 14.5microg/ml and (115) contained 18.2 microg/ml. The slides were read after 5-10 days' incubation at 37 deg.C.

Dwg.7/7

L35 ANSWER 10 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 91-164216 [22] WPIDS
CR 94-176265 [21]; 96-029815 [03]; 96-496897 [49]; 97-235569 [20]
DNN N91-125783 DNC C91-071128
TI Identifying Mycobacterium avium-intracellulare - using a paraffin coated slide to detect atypical mycobacteria.
DC B04 D16
IN OLLAR, R A
PA (INFE-N) INFECTECH INC
CYC 25
PI WO 9106669 A 910516 (9122)*
RW: DE DK FR GB IT MC MW SD
W: AU BB BG BR CA FI HU JP KP KR LK MG NO RO SU
AU 9067158 A 910531 (9135)
EP 497876 A1 920812 (9233) EN 22 pp
R: AT DE FR GB IT
US 5153119 A 921006 (9243) 7 pp
AU 9475949 A 950316 (9518)
AU 657671 B 950323 (9519)
EP 717112 A1 960619 (9629) EN 8 pp
R: AT DE FR GB IT
EP 497876 B1 960828 (9639) EN 14 pp
R: AT DE FR GB IT
AU 672138 B 960919 (9645)
DE 69028310 E 961002 (9645)
EP 717112 B1 980318 (9815) EN 7 pp
R: AT DE FR GB IT
DE 69032171 E 980423 (9822)
ADT EP 497876 A1 EP 90-916606 901016, WO 90-US5949 901016; US 5153119 A US 89-426573 891024; AU 9475949 A Div ex AU 90-67158 901016, AU 94-75949 941018; AU 657671 B AU 90-67158 901016; EP 717112 A1 Div ex EP 90-916606 901016, EP 96-100851 901016; EP 497876 B1 EP 90-916606 901016, WO 90-US5949 901016; AU 672138 B Div ex AU 90-67158 901016, AU 94-75949 941018; DE 69028310 E DE 90-628310 901016, EP 90-916606 901016, WO 90-US5949 901016; EP 717112 B1 Div ex EP 90-916606

901016, EP 96-100851 901016; DE 69032171 E DE 90-632171 901016, EP 96-100851 901016

FDT EP 497876 A1 Based on WO 9106669; AU 657671 B Previous Publ. AU 9067158, Based on WO 9106669; EP 497876 B1 Based on WO 9106669; AU 672138 B Previous Publ. AU 9475949; DE 69028310 E Based on EP 497876, Based on WO 9106669; EP 717112 B1 Div ex EP 497876; DE 69032171 E Based on EP 717112

PRAI US 89-426573 891024

AB WO 9106669 A UPAB: 980202

A method of speciating and identifying mycobacterium avium-intracellulare (MAI) in a specimen comprises: (a) placing a paraffin coated slide in a receptacle contg. a sterile aqs. inoculated with the specimen, (b) analysing the slide after exposure to the specimen to determine the presence or absence of atypical mycobacteria (AM); and (c) if AM are detd. to be present, performing at least one speciation assay to ascertain if the AM are MAI.

After the analysis step but before the speciation assays a test may be carried out by staining the slide for alcohol-acid fastness by: (a) placing the slide in a tube contg. Kinyoun carbolfuchsin, (b) immersing the slide in a tube contg. distd. water, (c) placing the slide in a tube contg. acid-alcohol, (d) immersing the slide in a tube contg. distd. water, (e) immersing the slide in a tube contg. an aqs. soln. of methylene blue counterstain and (f) immersing the slide in a tube contg. distd. water.

USE/ADVANTAGE - The method and **appts.** can be used for accurately and efficiently identifying MAI and for testing the same for **antibiotic sensitivity**. The method is used esp. for detecting MAI complex infection in AIDS patients. @(22pp Dwg.No.0/7)

L35 ANSWER 11 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD

AN 88-308698 [44] WPIDS

DNC C88-136504

TI **Detection** and quantification of **bacteria** in fluid, esp. urine - by adsorption of negative filter, staining, washing out free dye and colour comparison.

DC B04 D13 D16 J04

IN LONGORIA, C C

PA (POLY-N) APP POLYTECH INC; (TEXA-N) TEXAS BIORESOURCE CORP; (POLY-N) APPL POLYTECHN INC

CYC 7

PI EP 288621 A 881102 (8844)* EN 12 pp
R: DE FR GB IT
AU 8772139 A 881103 (8901)
JP 01124767 A 890517 (8926)
ES 2009860 A 891016 (9003)
EP 288621 B1 930310 (9310) EN 14 pp
R: DE FR GB IT
DE 3784702 G 930415 (9316)
DE 3784702 G 930415 (9316)

ADT EP 288621 A EP 87-303715 870427; JP 01124767 A JP 87-109630 870501; ES 2009860 A ES 87-1295 870430; EP 288621 B1 EP 87-303715 870427; DE 3784702 G DE 87-3784702 870427, EP 87-303715 870427; DE 3784702 G DE 87-3784702 870427, EP 87-303715 870427

FDT DE 3784702 G Based on EP 288621; DE 3784702 G Based on EP 288621

PRAI EP 87-303715 870427

AB EP 288621 A UPAB: 931118

Bacteria in a fluid sample are conc., immobilised and stained by (1) electrostatically-adsorbing **bacteria** to a specific portion of a negatively-charged filter; (2) staining the adsorbed **bacteria** with a dye effective at basic pH; and (3) diffusing out free dye to a different region of the filter, leaving stained **bacteria** in position for comparative quantitative analysis. Also new is an **appts.** for this process.

Pref. the sample is acidified with HCl, HNO3 or H2SO4 of pH 1-3, and the dye is Safranin O or basic fuschin, effective at pH 8-12, dissolved at 0.001-0.1% in a pH 8-12 buffer (K borate-K2CO3-KOH).

USE/ADVANTAGE - The method provides a simple, disposable, inexpensive and rapid system for **detecting**/quantifying **bacteria** in urine (esp.), milk, water, etc., and will normally **detect** viable **bacteria** at a concn. of 0.1 million/ml. It can also be used, after an appropriate incubation step, to **determine antibiotic susceptibility.**

Dwg.0/6

L35 ANSWER 12 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 87-192432 [27] WPIDS
DNC C87-080255
TI New antibacterial paulomycin derivs. - active against Gram-positive bacteria.
DC B03 D16
IN ARGOUDELIS, A D; BACZYNSKY, L
PA (UPJO) UPJOHN CO
CYC 16
PI WO 8703879 A 870702 (8727)* EN 44 pp
RW: AT BE CH DE FR GB IT LU NL SE
W: AU DK FI JP KR NO
AU 8767753 A 870715 (8739)
JP 63502029 W 880811 (8838)
ADT WO 8703879 A WO 86-US2607 861201; JP 63502029 W JP 86-500144 861201
PRAI US 85-812178 851223
AB WO 8703879 A UPAB: 930922
Antibacterially active panlomycin derivs. of formula (I) and their pharmacologically acceptable salts are new. R = R'-CH2CH(CH3)COOCH(CH3)- or CH3CH2COOCH(CH3)-; R' = H or CH3; R1 = gp. (a)-(d); X1 = H, 1-12C opt. branched alkyl or pharmacologically acceptable cation; R2, R3 = -CH2COOX2, -CH(CH3)COOX2, -CH(COOX2)CH2COOX2, -CH2CH(NHR5)COOX2, -CH2CH2CH(NHR5)COOX2, -CH2CH(OH)CH2OH, -CH2(CHOH)nCH2OH, -CH2CH2OH, -CH2CH(NHAc)COOX, or a gp. (e) or (f); n = 3 or 4; R4 = H or pharmacologically acceptable cation; R5 = H or Ac; R6 = H or CH3; and X2 = H, or pharmacologically acceptable cation; provided that when R = R'-CH2CH(CH3)COOCH(CH3)-, then R6 = H.

USE/ADVANTAGE - (I) inhibit the growth of Gram **bacteria**, e.g., B. subtilis, **Staph. aureus** , Strep. pyogenes and Strep. faecalis, and, except for ester derivs., are more soluble in aq. media than panlomycin, thus facilitating formulation. Certain cpds. are active against **Staph. aureus** strains resistant to methicillin, lincosaminide and macrolide **antibiotics**. (I) may be used in human and veterinary medicine; as disinfectants for dental and

medical equipment; in wash solns. for sanitation, e.g. for washing the hands or **appts.**, floors or furnishings or contaminated rooms or laboratories; as industrial preservatives, e.g. **bacteriostatic** rinses for laundered clothes or for impregnating paper or fabrics; and for suppressing the growth of **sensitive organisms** in plate assays and other microbiological media. (I) can also be used as feed supplements to promote th growth of livestock, fish, reptiles, etc.
0/0

L35 ANSWER 13 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 83-838860 [49] WPIDS
DNN N83-220400 DNC C83-120441
TI **Determn.** of activity of antibiotics on **bacterial** samples - by cultivation with radio-labelled thymidine, and sepg. the **bacteria** and counting.
DC B04 K08 S03 S05
IN AMARAL, L
PA (BRON-N) BRONX-LEBANON HOSP
CYC 1
PI US 4416995 A 831122 (8349)* 11 pp
PRAI US 81-300943 810910; US 84-630736 840713
AB US 4416995 A UPAB: 930925
Determn. of the activity of a selected chemical (I) on a **bacterial** sample in a growth medium is in a system in which (1) radioactively labelled thymidine or its analogue is added to the medium; (2) the mixt. is incubated before and after addn. of the thymidine or its analogue; (3) the **bacteria** are sepd. from the medium; and (4) the radioactivity of the sepd. **bacteria** is measured.

The **sensitivity** of **bacteria** to (I) can be rapidly **determined** and the system may be applied in automated **appts.** When (I) is an **antibiotic**, the MIC and MBC values can be reliably **determined.** The rate of uptake of the radiolabelled thymidine is a specific indicator of the rate of DNA synthesis by the **bacteria**. With blood, urine, swab samples etc., the procedure is useful in clinical diagnosis and in the monitoring of therapy. Water samples may be similarly tested.
0/2

L35 ANSWER 14 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 82-14184E [08] WPIDS
TI **Appts.** for nephelometry etc. - esp. for clinical tests of **antibiotic sensitivity**, uses camera to record light intensity passing through sample.
DC B04 J04 S03 S05
PA (NOEL-I) NOELLER H G; (NOLL-I) NOLLER H G
CYC 6
PI FR 2486655 A 820115 (8208)* 15 pp
GB 2088580 A 820609 (8223)
DE 3026089 A 820609 (8224)
GB 2088580 B 831026 (8343)
CA 1163459 A 840313 (8415)
IT 1143215 B 861022 (8830)
US 4784947 A 881115 (8848)
ADT US 4784947 A US 84-611913 840518
PRAI DE 80-3026089 800710

AB FR 2486655 A UPAB: 930915
Method and **appts.** is described for recording nephelometric, fluorometric or turbidimetric data derived by passing light through several samples in virtually **identical** test tubes or similar containers. A source of light directs rays of equal intensity on to each sample container.

The light irradiated by the sample at right angles to the rays of the light source is used to activate photosensitive film in a camera. The light source is activated to produce a brilliant flash simultaneously with activation of the shutter of a camera, pref. an instant camera, contg. the film.

The film is developed and comparisons made of the optical density or developed film patches corresp. to the individual sample tubes. In partic. the samples are of **bacteria** from a patient incubated in **identical** culture medium. Each sample is treated with a different **antibiotic**.

Useful in **determining** which of several **antibiotics** is most effective. Also as an instrument for measuring and recording the size and density of particles suspended in a fluid, e.g. waste water. This **appts.** is simple and cheap enough to be used in small laboratories for day-to-day clinical medicine. It is, extremely **sensitive** and reliable and provides rapid results.
1

L35 ANSWER 15 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 79-30092B [16] WPIDS
TI **Detection** of **bacteria** in samples - using **appts.** measuring small changes in pH caused by **bacterial** growth.
DC B04 D16 P31 S03 S05
PA (MARI-I) MARIEL C
CYC 2
PI FR 2397457 A 790316 (7916)*
GB 1601689 A 811104 (8145)
PRAI GB 77-29864 770715
AB FR 2397457 A UPAB: 930901
Appts. for the rapid **detection** of the presence of **bacteria** and also for **determining** the **sensitivity** of **bacteria** to various **antibiotics** comprises (a) a series of flaks into which culture media and blood samples are introduced aseptically, each flask having a sterilisable electrode, (b) an electronic switch, to which each electrodes is attached, (c) a pH meter attached to the switch, and (d) a potentiometric recorder and a mini-ordinator which follows a program and is connected to a keyboard and controls an alarm system.

Any **bacterial** growth in the flasks causes a change in pH in the medum, and this is **detected** and analysed to ensure that the change is significant, usually a change of 0.04 pH unit is significant.

Appts. does not give rise to contamination problems, nor involve the use of radioactive isotopes, unlike known diagnostic methods.

L35 ANSWER 16 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 76-96424X [52] WPIDS

TI Measuring **sensitivity** of microparticles to outside influences - esp. bacteria to **antibiotics**, by comparing light scattering patterns of treated and control samples.
DC B04 D16 J04 S03 S05
PA (SCIE-N) SCIENCE SPECTRUM IN
CYC 1
PI DE 2523652 A 761215 (7652)*
PRAI DE 75-2523652 750528
AB DE 2523652 A UPAB: 930901
Testing the **sensitivity** of microparticles (M) to environmental influences comprises (a) preparing an M-control sample; (b) placing this in the path of a thin, monochromatic beam of electromagnetic radiation; (c) measuring the intensity of the scattered radiation at a number of different angles of sample to beam direction so as to generate a differential control scattering pattern (P1); (d) repeating this procedure for an M sample which has been subjected to some alteration in its environment to generate a differential test scattering pattern (P2), (e) displacing P2 along a chosen axis relative to P1 to minimise the algebraic sum of the areas between the two; and (e) comparing the two patterns, any difference being a measure of the **sensitivity** of S to the environmental change. An **appts.** for carrying out this is also claimed. Esp. useful for **determining** the effects of **antibiotics** on **bacteria** but M may also be mammalian cells, viruses, antibodies etc. The method is more **sensitive** than turbidimetry and nephelometry esp. for **bacteria** with a long generation time. It can be used for assaying **antibiotics** in serum, meast, foodstuffs etc.

L35 ANSWER 17 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 76-47731X [25] WPIDS
TI Counting aerobic **bacterial** colonies deposited on growth plate - using scanning optical **detector**.
DC D16
PA (USSH) US SEC DEPT HEALTH
CYC 1
PI US 3962040 A 760608 (7625)*
PRAI US 71-149137 710602; US 72-149137 720602; US 74-451275 740314; US 75-544933 750128
AB US 3962040 A UPAB: 930901
A **bacterial** soln. is deposited as a spiral streak on a growth plate such that the rate of deposition varies along the spiral. After aerobic **bacteria** have grown the plate is placed in a scanning **appts.** where a beam of light is moved along the spiral streak while a **detector** senses changes in the light as a result of **bacterial** colonies on the plate. A counter records the number of colonies sensed while simultaneously the total area of the spiral scanned by the light is measured. Pref. the growth plate is rotated and the sensing head is tracked radially during colony counting. The method may be used for **antibiotic sensitivity** assay where the deposition rate of the sample is decreased along the spiral in a controlled manner. During the analysis the **appts.** can be set to stop after a predetermined number of colonies have been counted and the distance travelled along the spiral is then noted. The single spirally streaked plate replaces a number of plates with differing dilutions.

L35 ANSWER 18 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 71-17065S [10] WPIDS
CR 95-231888 [31]; 95-264089 [35]
TI Magnetically responsive, biologically active - substance and testing **apparatus**.
DC B04 D16
IN SAXHOLM, R
PA (SAX-I) SAXHOLM R; (SAXH-I) SAXHOLM R; (SAXH-N) SAXHOLM AS
CYC 3
PI CA 865068 A (7110)*
GB 1235685 A (7123)
GB 1235686 A (7123)
US 3843450 A 741022 (7444)
US 3981776 A 760921 (7640)
US 4021308 A 770503 (7719)
US 4213825 A 800722 (8032)
US 4371624 A 830201 (8307)
US 4657868 A 870414 (8717)
US 4992377 A 910212 (9109)
US 4992377 B1 961015 (9647) 1 pp
ADT US 4992377 A US 88-183671 880419; US 4992377 B1 US 88-183671 880419
PRAI NO 67-166874 670216
AB CA 865068 A UPAB: 930831
A testing dose of an active substance, which is used for examining its biological effect on **microorganisms**, comprises a magnetically responsive material. More spec. the latter may be admixed with the active substance or be encapsulated in an inert envelope. The magnetically responsive material is pref. Fe and is either separate from or together with the substance, prepd. in tablet form. Application is e.g. to **determining** the **sensitivity** of **bacteria** to **antibiotics**, chemotherapeutics etc. Method and **apparatus** for testing measuring **sensitivity** of **microorganisms** is also described.

L35 ANSWER 19 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 67-05786H [00] WPIDS
TI (A) Melinacidin prepared by culturing Acrostalagmus cinnabarimus var. melinacidinus under aerobic submerged conditions in an aqueous nutrient medium and separate.
DC B00 C00
PA (UPJO) UPJOHN CO
CYC 6
PI NL 6815117 A (6800)*
DE 1804519 A (6801)
FR 1593601 A (7042)
GB 1229297 A (7115)
JP 46019589 B (7121)
US 3639581 A (7210)
PRAI US 67-678046 671025
AB NL 6815117 A UPAB: 930831
(A) Melinacidin prepared by culturing Acrostalagmus cinnabarimus var. melinacidinus under aerobic submerged conditions in an aqueous nutrient medium and separating the melinacidin formed. (B) Microbicidal preparations contng. at least 86 bio units of melinacidin/ml.

Melinacidin is a complex of **antibiotics** with microbicidal activity against Gram-pos. and Gram-neg. **bacteria**. It may be used as a preserving agent for oils such as against **Proteus** vulgaris in cutting oils, or in wash solutions for sanitary purposes such as hand-cleaning agents, cleaning of **apparatus**, floors etc. in infected buildings, as technical preserving agent such as for **bacteriostatic** rinsing of laundered clothing, for impregnating paper and tissues and against growth of **sensitive** **organisms** in tests on plates or other microbiological media.

L35 ANSWER 20 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 66-37216F [00] WPIDS
TI (A) Melinacidin prepared by culturing Acrostalagmus cinnabarimus var. melinacidinus under aerobic submerged conditions in an aqueous nutrient medium and separate.
DC B00 C00
PA (UPJO) UPJOHN CO
CYC 6
PI NL 6815117 A (6800)*
DE 1804519 A (6801)
FR 1593601 A (7042)
GB 1229297 A (7115)
JP 46019589 B (7121)
US 3639581 A (7210)
PRAI US 67-678046 671025
AB NL 6815117 A UPAB: 930831
(A) Melinacidin prepared by culturing Acrostalagmus cinnabarimus var. melinacidinus under aerobic submerged conditions in an aqueous nutrient medium and separating the melinacidin formed.
(B) Microbicidal preparations contng. at least 86 bio units of melinacidin/ml.
Melinacidin is a complex of **antibiotics** with microbicidal activity against Gram-pos. and Gram-neg. **bacteria**. It may be used as a preserving agent for oils such as against **Proteus** vulgaris in cutting oils, or in wash solutions for sanitary purposes such as hand-cleaning agents, cleaning of **apparatus**, floors etc. in infected buildings, as technical preserving agent such as for **bacteriostatic** rinsing of laundered clothing, for impregnating paper and tissues and against growth of **sensitive** **organisms** in tests on plates or other microbiological media.

L35 ANSWER 21 OF 21 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 66-27289F [00] WPIDS
TI **Apparatus** for determining sensitivity of germs to.
DC B00

PA (ISTS) IST SIEROTERAPICO E VACCINOGENO TOSC
CYC 1
PI BE 691532 A (6800)*
PRAI BE 66-691532 661220
AB BE 691532 A UPAB: 930831
Apparatus for the **determination** of **sensitivity** of germs to chemotherapeutic agents and **antibiotics** for diagnostic purposes.
The **apparatus** consists of a transparent tray contng. rows of cup shaped depressions in which are placed a lyophilised culture medium, an indicator to show up **bacterial** growth, and an **antibiotic** or chemotherapeutic agent at different concentrations.
One cup serves as a control. The lyophilised medium is held in place by means of projections in the bottom of the cups. The medium is regenerated by addition of physiological soln. to each cup. The germs to be investigated are added to each cup. A transparent lid which may cover the tray completely or may be supported slightly open is marked by a suitable code to **identify** the contents of each cup. Observation of the colour change indicates **sensitivity** or lack of **sensitivity** to the drug.
Diagnostic **determination** of the **sensitivity** of germs taken from patients to **antibiotics** and chemotherapeutic agents.

=> fil biosis

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FROM JANUARY 1969 TO DATE.

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CAS REGISTRY NUMBERS (R) LAST ADDED: 21 October 1998 (981021/UP)

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(FILE 'BIOSIS' ENTERED AT 09:45:10 ON 26 OCT 1998)
DEL HIS Y
L1 341825 S (BACTER? OR MICROORGANIS? OR ORGANISM?)/TI,ST
L2 262748 S (E COLI OR ESCHERICHIA COLI OR KLEBSIELLA OR ENTEROBAC
L3 289418 S L2/ST,TI OR STAPHYLOCOCC?/TI,ST
L4 20400 S (L1 OR L3) (L) (IDENTIF? OR DETECT? OR DETERMIN?)
L5 327848 S 32000/CC
L6 9163 S L4 AND L5
L7 13897 S (ANTIMICROBI? OR ANTI MICROB? OR ANTIBIOTIC?) (L) (TEST
L8 14769 S SUSCEPTIBIL? (L) TEST?
L9 405 S L6 AND (L7 OR L8)

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L10      621998 S WELL# OR CHAMBER# OR COMPARTMENT?
L11          26 S L9 AND L10
L12        6111 S AMOXICILLIN OR CLAVULANIC ACID OR ENROFLOXACIN
L13           0 S L12 AND L11
L14       47503 S APPT OR APPT# OR APPARATUS
L15           3 S L9 AND L14
L16          26 S L11 NOT L15

     FILE 'BIOSIS' ENTERED AT 10:33:34 ON 26 OCT 1998

=> d bib ab st l15 1-3;d bib ab st l16 1-26


L15  ANSWER 1 OF 3  BIOSIS  COPYRIGHT 1998 BIOSIS
AN   90:469035  BIOSIS
DN   BA90:108455
TI   DETECTION OF METHICILLIN RESISTANCE IN
     STAPHYLOCOCCI BY USING A DNA PROBE.
AU   ARCHER G L; PENNELL E
CS   DEP. MED. DIV. OF INFECTIOUS DISEASE, MED. COLL. OF VIRGINIA,
     VIRGINIA COMMONWEATH UNIV., RICHMOND, VA. 23298-0049.
SO   ANTIMICROB AGENTS CHEMOTHER 34 (9). 1990.  1720-1724. CODEN: AMACCQ
     ISSN: 0066-4804
LA   English
AB   A DNA probe derived from the PBP 2a gene of the methicillin-resistant
     Staphylococcus aureus COL was compared with phenotypic microbiologic
     tests for its ability to identify methicillin-resistant and
     -susceptible staphylococci. Lysates were applied to nitrocellulose
     with a dot blot apparatus. Isolates tested were
     both S. aureus and coagulase-negative staphylococci that had been
     recovered from a variety of geographic and clinical sources. When
     compared with a spread plate phenotypic test, the  DNA
     probe gave sensitivity, specificity, and predictive values for both
     positive and negative tests of 100% for 204 S. aureus
     isolates (103 positive, 101 negative) and 99, 95, 99, and 95%,
     respectively, for 249 coagulase-negative staphylococci (210 positive,
     39 negative). The probe was more sensitive than broth microdiluton
     and more specific than agar dilution in identifying
     methicillin-resistant and -susceptible coagulase-negative
     staphylococci; all tests were equally accurate in
     identifying  the methicillin susceptibility of S. aureus
     DNA probe analysis for determining the methicillin
     susceptibility of staphylococci was rapid, easily
     interpretable, and equally accurate with radioactive and
     nonradioactive probes, and it gave results equivalent to the most
     sensitive microbiologic test for all staphylococcus species
     studied.
ST   STAPHYLOCOCCUS-AUREUS ANTIBACTERIAL AGENT SENSITIVITY SPECIFICITY
     POSITIVE PREDICTIVE VALUE NEGATIVE PREDICTIVE VALUE

L15  ANSWER 2 OF 3  BIOSIS  COPYRIGHT 1998 BIOSIS
AN   82:309079  BIOSIS
DN   BA74:81559
TI   RAPID DETERMINATION OF BACTERIAL
     SUSCEPTIBILITY TO ANTI MICROBIAL AGENTS
     BY A SEMI AUTOMATED CONTINUOUS FLOW METHOD.
AU   BASCOMB S; GLYNN A A; GAYA H; SPENCER R C; SHINE P J
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CS DEP. BACTERIOL., WRIGHT-FLEMING INST., ST. MARY'S HOSP. MED. SCH., LONDON, ENGL. W2 1PG, UK.
SO J ANTIMICROB CHEMOTHER 9 (5). 1982. 343-356. CODEN: JACHDX ISSN: 0305-7453
LA English
AB Experiments with a semi-automated **susceptibility** **test** system are described. The system was based on a continuous flow **apparatus**, which was used to estimate extinction in broth cultures (inoculated manually), after 3-4 h incubation. Five media were **tested** for ability to support bacterial growth; although Todd-Hewitt broth came out best, it was unsuitable for trimethoprim **testing** and so Iso-sensitest broth was chosen. The system was used to **test** 167 widely different bacterial strains for **susceptibility** to ampicillin, nalidixic acid, nitrofurantoin, trimethoprim and tetracycline. These agents were added to the **test** broth in disks and similar disks were used to **test** the same strains by the Stokes modification of the disk-diffusion **susceptibility** **test**. **Test** strains (109) were freshly isolated from urine specimens, 47 came from a culture collection and 11 were in fresh urine. Agreement between the semi-automated and disk methods was 83, 68 and 87% for the 3 groups. Reasons for these discrepancies between the 2 methods, ways of improving the results and advantages of the semi-automated over current commercial systems are discussed.
ST TRIMETHOPRIM AMPICILLIN NALIDIXIC-ACID NITROFURANTOIN TETRACYCLINE ANTIBACTERIAL-DRUG URINE SPECIMENS

L15 ANSWER 3 OF 3 BIOSIS COPYRIGHT 1998 BIOSIS
AN 79:271877 BIOSIS
DN BA68:74381
TI RAPID AUTOMATED **DETECTION** OF **BACTERIAL** GROWTH BY IMPEDANCE MEASUREMENT.
AU TSUCHIYA T; TERASHIMA E; KAWANO K; NAKANO E; TAKENAKA M; KUMASAKA K; TSUCHIYA T
CS DEP. CLIN. PATHOL., NIHON UNIV. SCH. MED., 173 30 OYAGUCHI, KAMI, ITABASHI, TOKYO, JPN.
SO NICHIDAI IGAKU ZASSHI 37 (4). 1978. 405-416. CODEN: NICHAS ISSN: 0029-0424
LA Japanese
AB Bacterial growth was detected by monitoring the changes in electrical impedance of broth cultures. Electrodes are key-point for obtaining reliable results. Other parts of **apparatus** are relatively simple, as compared with such other methods of monitoring bacterial growth as photometric systems or the Coulter counter. Golden electrodes may be best. Signals of bacterial growth are obtained with concentration of bacteria as low as 106-107/ml. The results of the **antibiotic-sensitivity** test are obtained within 2-3 h and this impedance method may be useful for rapid determination of bacterial **sensitivity** to **anti-microbial** agents. The speed of response of impedance changes depends on the initial concentration of active microorganisms. The initial concentration of the microorganisms is determined by measuring the response time.
ST **ANTIBIOTIC SENSITIVITY** TEST

L16 ANSWER 1 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 98:435153 BIOSIS
DN 01435153
TI An inexpensive and reliable method for routine **identification** of **staphylococcal** species.
AU Monsen T; Ronnmark M; Olofsson C; Wistrom J
CS Dep. Clin. Bacteriol., Univ. Hosp. Umea, 901 85 Umea, Sweden
SO European Journal of Clinical Microbiology & Infectious Diseases 17 (5). 1998. 327-335. ISSN: 0934-9723
LA English
AB The aim of this study was to develop a simple, reliable, and inexpensive in-house system for routine species identification of staphylococci in clinical practice. The system combines 15 key **tests** (including carbohydrate fermentation) performed in micro-**well** strips and **antimicrobial** disk diffusion **susceptibility tests** performed on standardized paper disk method **antibiotic sensitivity** medium agar. Twenty-eight staphylococcal reference strains belonging to 18 different species were correctly identified using this in-house system. A total of 291 clinical staphylococci isolates were evaluated with the in-house system and a conventional identification scheme. The in-house system identified 281 (96.6%) of these 291 isolates. Eleven different species were recognised. The five species most frequently identified were Staphylococcus epidermidis (48.6%), Staphylococcus aureus (27.8%), Staphylococcus haemolyticus (8.2%), Staphylococcus hominis (5.7%), and Staphylococcus warneri (5.3%). There was an agreement of 86.3% between the species identification obtained with the in-house system and the conventional identification scheme. All coagulase-negative isolates initially identified as species other than Staphylococcus epidermidis as **well** as indistinctly identified isolates were also evaluated with a commercial identification system. The agreement between species identification obtained with the in-house system and the commercial system for 101 identified isolates was 73%. Several isolates that were difficult to distinguish with the conventional scheme and/or the commercial system were identified with the aid of the **antimicrobial susceptibility test** included in the in-house system. The described **test** scheme should be of value for identification of clinically significant staphylococci species.
ST RESEARCH ARTICLE; **STAPHYLOCOCCUS** sp.; **STAPHYLOCOCCUS** EPIDERMIDIS; **STAPHYLOCOCCUS** AUREUS; **STAPHYLOCOCCUS** HAEMOLYTICUS; **STAPHYLOCOCCUS** HOMINIS; **STAPHYLOCOCCUS** WARNERI; HUMAN; PATHOGEN; SPECIES **IDENTIFICATION**; PATIENT; MICROWELL STRIPS; **ANTIMICROBIAL** DISK DIFFUSION **SUSCEPTIBILITY TESTS**; CARBOHYDRATE FERMENTATION **TEST**; ENZYME PRODUCTION **TEST**; METHODOLOGY; INFECTION; HUMAN MEDICINE; LABORATORY EQUIPMENT; **BACTERIAL** SPECIES **IDENTIFICATION** METHOD; DIAGNOSTIC METHOD

L16 ANSWER 2 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 97:322032 BIOSIS
DN 99621235
TI Methods in Molecular Medicine: Helicobacter pylori protocols.
AU Clayton C L; Mobley H L T

CS Glaxo Wellcome Res. and Dev. Ltd., Stevenage, UK
SO Clayton, C. L. and H. L. T. Mobley (Ed.). Methods in Molecular Medicine: Helicobacter pylori protocols. xiii+274p. Humana Press Inc.: Totowa, New Jersey, USA. 0 (0). 1997. XIII+274P. ISBN: 0-89603-381-3
DT Book
LA English
AB This publication presents twenty-four independently authored chapters of easily reproducible protocols for the identification and molecular manipulation of Helicobacter pylori as **well** as the study of its metabolism, epidemiology, and taxonomy. Study protocols for H. pylori in various animal models are also discussed in the context of vaccine research and examine such topics as cytotoxin genes and surface antigens. Other topics contained in the chapters include culturing H. pylori, transformation and insertional mutagenesis, physiological analysis and protein characterization, **antibiotic sensitivity testing**, and H. pylori digestion by restriction endonuclease. Step-by-step protocols are augmented by numerous figures, tables, black and white photographs, and references in each chapter. This publication could be considered a helpful experimental and clinical laboratory reference for anyone involved in Helicobacter pylori study or research.
ST BOOK; HELICOBACTER PYLORI; ANIMAL; **DETECTION**; PATHOGEN; ANIMAL MODEL; HOST; INFECTION; METHODOLOGY; **BACTERIAL DETECTION** PROTOCOLS; LABORATORY METHODS; **BACTERIAL** PHYSIOLOGY

L16 ANSWER 3 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 97:282701 BIOSIS
DN 99581904
TI Reliability of **bacterial** counting **chambers** to **determine** inoculum density of Mycobacteria.
AU Shank D D; Wolfe D M; Yang H
CS Becton Dickinson Microbiol. Systems, Sparks, MD 21152, USA
SO 97th General Meeting of the American Society for Microbiology, Miami Beach, Florida, USA, May 4-8, 1997. Abstracts of the General Meeting of the American Society for Microbiology 97 (0). 1997. 197. ISSN: 1060-2011
DT Conference
LA English
ST MEETING ABSTRACT; MEETING POSTER; MYCOBACTERIUM TUBERCULOSIS; INOCULUM DENSITY; PATHOGEN; INFECTION; **BACTERIAL** COUNTING **CHAMBERS**; BDPROBETEC SYSTEM; DRUG **SUSCEPTIBILITY TESTING**; METHODOLOGY; RELIABILITY; **DETECTION** METHOD

L16 ANSWER 4 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 95:315645 BIOSIS
DN 98329945
TI The effect of incubation temperature and sodium chloride concentration on the growth kinetics of Vibrio anguillarum and Vibrio anguillarum-related organisms.
AU Guerin-Faublee V; Rosso L; Vigneulle M; Flandrols J P
CS Univ. Claude Bernard, URA CNRS 243, Lab. Bacteriol., Fac. Med. Lyon-Sud, 69921 Oullins Cedex, France
SO Journal of Applied Bacteriology 78 (6). 1995. 621-629. ISSN: 0021-8847

LA English
AB The effect of temperature and NaCl concentration on the growth kinetics of Vibrio anguillarum and V. anguillarum-related (VAR) strains was studied. For one wild VAR strain, NaCl concentration interfered with growth temperature parameters, in particular, with the maximum growth temperature but also with the optimum temperature (defined as the temperature at which mu-max equals its maximal value mu-opt), and with mu-opt itself For the same strain, optimal growth required the adding of NaCl to the medium to a final concentration of 1.5%. These results were not confirmed by **tests** on a V. anguillarum collection strain. When the NaCl concentration in the culture media was 1.5%, the optimum temperature for the nine strains studied ranged from 29.7 degree C to 34 degree C whereas the maximum temperature ranged between 35.3 degree C and 38.5 degree C. Hence, **antibiotic susceptibility testing** as **well** as biochemical identification might be carried out at 30 degree C in the presence of 1.5% NaCl, which corresponded to a suboptimal growth.
ST RESEARCH ARTICLE; VIBRIO ANGUILLARUM; **BACTERIA**; **MICROORGANISM**; METHODS; FISH PATHOGEN; SALT; OPTIMAL GROWTH REQUIREMENTS; CULTURE MEDIA; BIOCHEMICAL **IDENTIFICATION**; **ANTIBIOTIC SUSCEPTIBILITY TESTING**; MARICULTURE

L16 ANSWER 5 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 95:310415 BIOSIS
DN 98324715
TI Ability of commercial and reference **antimicrobial susceptibility testing** methods to **detect** vancomycin resistance in **enterococci**.
AU Tenover F C; Swenson J M; O'Hara C M; Stocker S A
CS Nosocomial Pathogens Lab. Branch (G08), Cent. Dis. Control Prevention, 1600 Clifton Rd. NE, Atlanta, GA 30333, USA
SO Journal of Clinical Microbiology 33 (6). 1995. 1524-1527. ISSN: 0095-1137
LA English
AB We evaluated the abilities of 10 commercially available **antimicrobial susceptibility testing** methods and four reference methods (agar dilution, broth microdilution, disk diffusion, and the agar screen plate) to classify enterococci correctly as vancomycin susceptible or resistant using 50 **well**-characterized strains of enterococci. There was a high level of agreement of category classification data obtained with broth-based systems (Sceptor, MicroMedia, Pasco, and Sensititre), agar dilution, and an **antibiotic** gradient method (E **test**) with data obtained by reference broth microdilution; no very major or major errors were seen, and minor errors were ltoreq 6%. Increased minor error rates were observed with disk diffusion (12%), Alamar (16%), Uniscept (16%), and conventional (overnight) MicroScan panels (16%). The errors were primarily with Enterococcus casseliflavus strains and organisms containing the vanB vancomycin resistance gene. Very major error rates of 10.3 and 20.7% were observed with Vitek and MicroScan Rapid (MS/Rapid) systems, respectively; however, only the MS/Rapid system produced major errors (13.3%). On repeat **testing** of discrepant isolates, the very major error rate with the Vitek system dropped to 3.4%, while the very major error rate with the MS/Rapid system increased to 27.6%;

major errors with the MS/Rapid system were not resolved. Many of the commercial systems had only 4 dilutions of vancomycin, which resulted in up to 84% of values being off scale (e.g., Uniscept). Of the methods **tested**, most conventional broth- and agar-based methods proved to be highly accurate when incubation was done for a full 24 h, although several of the **tests** had high minor error rates. Automated systems continued to demonstrate problems in detecting low-level resistance.
ST RESEARCH ARTICLE; HUMAN NOSOCOMIAL INFECTIONS; ANTIBIOTIC RESISTANCE; AGAR DILUTION; BACTERIAL GENETICS; AUTOMATED SYSTEMS; VANCOMYCIN; ANTIBACTERIAL-DRUG

L16 ANSWER 6 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 94:404875 BIOSIS
DN 97417875
TI Development of enzyme-labeled oligonucleotide probe for **detection** of mecA gene in methicillin-resistant **Staphylococcus** aureus.
AU Shimaoka M; Yoh M; Segawa A; Takarada Y; Yamamoto K; Honda T
CS Res. Inst. Microbial Dis., Osaka Univ., 3-1 Yamadaoka, Suita, Osaka 565, JAP
SO Journal of Clinical Microbiology 32 (8). 1994. 1866-1869. ISSN: 0095-1137
LA English
AB A DNA hybridization method with an enzyme-labeled oligonucleotide probe (mecA-ELONP) was developed to detect the methicillin-resistant gene (mecA) in methicillin-resistant Staphylococcus aureus. For rapid identification, bacterial colonies were transferred from agar plates directly onto nylon membranes. Lysis of cells, denaturation of DNA, and hybridization were performed on the membranes. These procedures required only 3 h for completion. The results obtained by this test closely corresponded with those obtained by determining the MICs of oxacillin against S. aureus. The results of the mecA-ELONP also correlated **well** with those of a commercially available PCR test. Thus, mecA-ELONP proved to be a reliable and convenient method for the rapid identification of methicillin-resistant S. aureus, which could be useful in clinical microbiology laboratories.
ST RESEARCH ARTICLE; STAPHYLOCOCCUS AUREUS; HUMAN; METHICILLIN; ANTIBACTERIAL-DRUG; DNA HYBRIDIZATION; **SUSCEPTIBILITY TEST**; HYBRIDIZATION PROCEDURE; POLYMERASE CHAIN REACTION; DIAGNOSTIC METHOD

L16 ANSWER 7 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 92:391335 BIOSIS
DN BA94:63510
TI RAPID **DETECTION** OF THE MECA GENE IN METHICILLIN-RESISTANT **STAPHYLOCOCCI** BY ENZYMATIC **DETECTION** OF POLYMERASE CHAIN REACTION PRODUCTS.
AU UBUKATA K; NAKAGAMI S; NITTA A; YAMANE A; KAWAKAMI S; SUGIURA M; KONNO M
CS DEP. CLINICAL PATHOLOGY, SCHOOL MEDICINE, TEIKYO UNIVERSITY, ITABASHI-KU, TOKYO 173, JPN.
SO J CLIN MICROBIOL 30 (7). 1992. 1728-1733. CODEN: JCMIDW ISSN: 0095-1137
LA English
AB In order to identify methicillin-resistant staphylococci from clinical sources with ease and reliability, enzymatic detection of

polymerase chain reaction (ED-PCR) was applied. ED-PCR is based on the capture of amplified products via biotin-streptavidin affinity and the detection of an incorporated hapten in amplified products with an enzyme-linked antibody. In order to identify methicillin-resistant staphylococci of all species, a 150-bp fragment of the mecA gene was targeted for ED-PCR. After PCR was performed with a pair of biotin and dinitrophenol 5'-labeled primers, the reaction mixture was applied to a microtiter **well** precoated with streptavidin. Thereafter, bound PCR products were detected colorimetrically with alkaline phosphatase-conjugated anti-dinitrophenol antibody. The extraction of DNA from staphylococcal cells for PCR was simplified so that it could be performed within one tube. The total assay, including PCR, took less than 3 h. The sensitivity of mecA gene detection ranged from > 5 .times. 102 CFU per tube for Staphylococcus aureus to > 5 .times. 103 CFU per tube for Staphylococcus epidermidis. Genotyping results obtained by ED-PCR of 161 **tested** strains from the colonies (97 strains of S. aureus and 64 strains of coagulase-negative staphylococci) were compared with the phenotypic **susceptibilities** of the strains to oxacillin. The results of ED-PCR showed excellent agreement with the MICs of oxacillin with very few exceptions; only one strain of S. aureus and two strains of coagulase-negative staphylococci were found to possess the mecA gene, which was discrepant with their phenotypes. Fifty-five blood culture samples were also **tested** by ED-PCR. For staphylococcal isolates in 33 of the cultures, oxacillin MICs were > 4 .mu.g/ml; 31 of the 33 staphylococcal isolates were determined by ED-PCR to be mecA gene positive. These results suggest that ED-PCR can be used with reasonable confidence in the clinical microbiological laboratory.

ST STAPHYLOCOCCUS-AUREUS STAPHYLOCOCCUS-EPIDERMIDIS COAGULASE NEGATIVE STAPHYLOCOCCI SENSITIVITY GENOTYPING OXACILLIN MINIMUM INHIBITORY CONCENTRATION ANTIBACTERIAL-DRUG MOLECULAR DIAGNOSTIC METHOD

L16 ANSWER 8 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 91:71315 BIOSIS
DN BA91:39975
TI USE OF PLASMID ANALYSIS TO **DETERMINE** THE SOURCE OF **BACTERIAL** INVASION OF THE URINARY TRACT.
AU DONOVAN W H; HULL R; CIFU D X; BROWN H D; SMITH N J
CS THE INST. REHABILITATION, BAYLOR COLL. MED., HOUSTON, TEX.
SO PARAPLEGIA 28 (9). 1990. 573-582. CODEN: PRPLBL
LA English
AB Gram negative colonisation and infection of the urinary tract is a **well** recognised complication of the neuropathic bladder cuased by spinal cord injury (SCI). K. pneumoniae accounts for one third of all urinary tract infections in hospitalised SCI patients. Plasmid analysis has been shown to reliably fingerprint bacterial strains, particularly K. pneumoniae, so that growth from two separate locations in or on the body can be accurately analysed as to migration from a reservoir to a target location. Eighty-seven hospitalised SCI patients on intermittent catheteration for a total of 586 patient-weeks were studied. Twice weekly catheterised urine specimens and once weekly rectal swab cultures were taken from each patient. Thirty seven patients experienced at least one clinically significant (colony count > 10 000/mL) urinary tract colonisation caused by K pneumoniae, representing 66 total colonisations. Further

analysis of 31 of these 37 patients revealed: K. pneumoniae in all of their stool cultures ($p < 0.05$) and the identical strain of K. pneumoniae in the urine as **well** as the stool in 72% of the 66 colonisations ($p < 0.05$). Analysis of 14 patients without K. pneumoniae urinary colonisations showed absence of faecal K. pneumoniae in 3, and predominant growth in only 4. In 22 of the 37 patients, multiple K. pneumoniae urinary colonisations were noted, representing 27 pairs of colonisation. Fifteen of the pairs were found to be relapsing (caused by two identical bacterial strains), and 12 were recurrent (caused by two different bacterial strains). Thirteen of the 15 relapsing pairs also had identical urine and stool K. pneumoniae strains ($p < 0.05$). All colonisations were treated with appropriate **antibiotics** based on culture and **sensitivity** reports. Fourteen of the 15 relapsing colonisation pairs have identical antibiograms ($p < 0.05$), while all 12 of the recurrent colonisation pairs had different antibiograms ($p < 0.05$). The differences noted on sensivity patterns (antibiograms) correlated with differences among strains of K. pneumoniae based upon plasmid analysis. Treatment of bacteriuria did not affect the nature of repeated colonisations regardless of the antibotic chosen, the route of administration or the duration of treatment. We conclude that K. pneumoniae found in the urinary tract of spinal cord patients usually derive from that individual's own bowel flora, particularly in the case of relapsing bacteriuria. Further, relapsing bacteriuria in patients on intermittent catherisation is typically not due to urinary tract lithiasis or other urinary tract pathology. These results also suggest that abundant bowel colonisation with K. pneumoniae is a predisposing but not a prerequisite factor for subsequent urinary colonisation. The clinical and epidemiological improtance of this data warrants further study.

ST HUMAN KLEBSIELLA-PNEUMONIAE SPINAL CORD INJURY BOWEL FLORA ANTIBIOTIC TREATMENT

L16 ANSWER 9 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:490382 BIOSIS
DN BA88:116919
TI RESISTANCE TO DICLOXACILLIN METHICILLIN AND OXACILLIN IN METHICILLIN-SUSCEPTIBLE AND METHICILLIN-RESISTANT **STAPHYLOCOCCUS**-AUREUS **DETECTED** BY DILUTION AND DIFFUSION METHODS.
AU ROSDAHL V T; FRIMODT-MOLLER N; BENTZON M W
CS STAPHYLOCOCCUS LAB., STATENS SERUMINST., AMAGER BLVD. 80, DK-2300 COPENHAGEN S, DENMAK.
SO APMIS (ACTA PATHOL MICROBIOL IMMUNOL SCAND) 97 (8). 1989. 715-722. CODEN: APMSEL ISSN: 0903-4641
LA English
AB A total of 54 Staphylococcus aureus strains of varying methicillin resistance were investigated for their resistance to methicillin, oxacillin and dicloxacillin by different diffusion **tests**. Inhibition zones were measured around locally prepared paperdiscs with 10 .mu.g methicillin, 5 and 10 .mu.g oxacillin, 5 and 10 .mu.g dicloxacillin, PDM paperdiscs with 10 .mu.g methicillin or oxacillin and Neo-sensitabs tablets with methicillin or oxacillin. All diffusion **tests** were performed both with Mueller-Hinton agar and Danish Blood agar as **well** as at 37.degree. C and 30.degree. C and read after overnight incubation. Differences in zone diameter under different conditions were found to be independent of

the **susceptibility** level of the strains. Seventeen of the strains were detected as methicillin-resistant (MRSA) by two methods including high inoculum and prolonged incubation at 30.degree. C. The minimum inhibitory concentration (MIC) of the 54 strains was determined by a plate dilution method at 30.degree. C and 37.degree. C. A 10 .mu.g locally prepared methicillin disc detected all MRSA strains wiht no false reactions either at 37.degree. C on Mueller-Hinton agar. Investigations with oxacillin discs had to be performed at 30.degree. C or with a 5 .mu.g disc in order to detect correctly. PDM paperdiscs gave reactions identical to the corresponding locally prepared discs. Methicillin Neo-sensitabs detected all MRSA strains but also included a few susceptible strains among the resistant ones. Addition of blood increased the number of not-detected MRSA strains. All 17 MRSA strains were susceptible to dicloxacillin by the dilution method, and the disc diffusion **test** showed similar results. Dicloxacillin discs therefore did not detect the presence of MRSA strains. The implications of replacement of the methicillin/oxacillin disc by a dicloxacillin disc are discussed.

ST ANTIBACTERIAL-DRUG MINIMUM INHIBITORY CONCENTRATION ZONE DIAMETER **ANTIBIOTIC** DRUG **TESTING**

L16 ANSWER 10 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:358763 BIOSIS
DN BA88:50877
TI PRESUMPTIVE **IDENTIFICATION** OF ANAEROBIC **BACTERIA** OF HUMAN ORAL ORIGIN.
AU DOI K
CS DEP. BACTERIOL., OSAKA DENTAL UNIV., 5-31 OTEMAE 1-CHOME, CHUO-KU, OSAKA 540, JAPAN.
SO J OSAKA ODONTOL SOC 52 (2). 1989. 166-188. CODEN: SIGAAE ISSN: 0030-6150
LA Japanese
AB Twenty strains of fastidious organisms in the stock of anaerobic bacteria derived from human oral infections and oral microflora were selected and presumtively identified by means of growth in various liquid media, morphological observation by negative staining, enzymatic chracterization with the API ZYM system and **antibiotic** sensitives. Since all of the black-pigmented gram-negative rods grew comparatively **well** in trypticase soy-yeast broth (TSY), thioglycollate medium (TGC) or Gifu anaerobic medium (GAM), routine identification procedures were performed using these liquid media. As a result, strains 6, 15, 44 and 45 were identified as Bacteroides gingivalis, B. intermedius, B. endodontalis and B. endodontalis, respectively. Among the nonblack-pigmented gram-negative rod strains, strain 8 was presumtively identified as Haemophilus actinomycetemcomitans based on the characteristics of capnophile, clindamycin resistance and enzymatic activity with the API ZYM system. Strain 12 was considered to be Butyrivibrio species from morphological observation. Strains 21 and 22 were presumptively identified as Wolinella species, because they grew in the presence of formate and fumarate, produced weakly alkaline and acid phosphatase, esterase, esterase lipase, leucine arylamidase and phosphoamidase, and were resistant to cephalexin and vancomycin. Strain 54 was identified as B. forsythus based on its enzymatic activity pattern. Negative cocci (strains 7 and 10) were considered to be Veillonella species from the cell size, promotion of growth by medium V and

antibiotic sensitivity pattern. Among the gram-positive rods, strains 2, 27 and 19 were presumptively identified as Eubacterium species based on the production of butyrate in strains 2 and 27, and the requirement of arginine for growth in strain 19. In conclusion, the combination of use of various liquid media, morphological observation by negative staining, enzymatic characterization with the API ZYM system and **antibiotic sensitivities** is useful as a tool for presumptive identificaiton of some strains of fastidious anaerobic bacteria of human oral origin.

ST BACTEROIDES-GINGIVALIS BACTEROIDES-INTERMEDIUS BACTEROIDES-ENDODONTALIS HAEMOPHILUS-ACTINOMYCETEMCOMITANS BUTYRIVIBRIO-SP EUBACTERIUM-SP WOLINELLA-SP BACTEROIDES-FORSYTHUS VEILLONELLA-SP ENZYMATIC CHARACTERIZATION ORAL INFECTION ORAL MICROFLORA MORPHOLOGY LIQUID MEDIUM GROWTH

L16 ANSWER 11 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:339428 BIOSIS
DN BA88:42428
TI RAPID FLOW CYTOMETRIC **BACTERIAL DETECTION** AND **DETERMINATION** OF SUSCEPTIBILITY TO AMIKACIN IN BODY FLUIDS AND EXUDATES.
AU COHEN C Y; SAHAR E
CS DEP. BIOTECHNOL., GEORGE S. WISE FAC. LIFE SCI., TEL-AVIV UNIV., TEL-AVIV, ISR. 69978.
SO J CLIN MICROBIOL 27 (6). 1989. 1250-1256. CODEN: JCMIDW ISSN: 0095-1137
LA English
AB A flow cytometry-based method for rapid and quantitative detection of bacteria in various clinical specimens and for rapid determination of **antibiotic** effect is described. Achieving such a measurement with high **sensitivity** required discrimination between bacteria and other particles which were often present in clinical samples in high concentrations. This discrimination was facilitated by detcting the bacterial characteristic light scatter and fluorescence signals following staining, e.g., with the fluorescent nucleic acid-binding dye ethidium bromide, as **well** as by measuring bacterial proliferation during short time intervals. **Antibiotic susceptibility** was measured by observing the inhibition of such proliferation. The method was applied to 43 clinical specimens from various sources, such as wound exudates, bile, serous cavity fluids, and bronchial lavage. Bacterial detection, achieved in less than 2 h, agreed with results of conventional methods with a **sensitivity** of 74% and a specificity of 88%. **Susceptibility** to amikacin was detected in 1 h in 92% of 13 positive specimens.
ST ANTIBACTERIAL AGENT LIGHT SCATTER PROPERTY FLUORESCENCE SIGNAL WOUND EXUDATE BILE SEROUS CAVITY FLUID BRONCHIAL LAVAGE

L16 ANSWER 12 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:121686 BIOSIS
DN BA87:56339
TI FLUOROMETRIC ASSAY FOR FLEROXACIN UPTAKE BY BACTERIAL CELLS.
AU CHAPMAN J S; GEORGOPAPADAKOU N H
CS BIOCIDES DEP., ROHM AND HAAS CO., SPRING HOUSE, PA. 19477.
SO ANTIMICROB AGENTS CHEMOTHER 33 (1). 1989. 27-29. CODEN: AMACCQ ISSN: 0066-4804

LA English
AB A sensitive and convenient method for quinolone determination has been developed, based on the natural fluorescence of the quinolone nucleus. Fleroxacin (Ro 23-6240; AM 833), used as a prototype quinolone in these studies, had an excitation maximum at 282 nm and an admission maximum at 442 nm (pH 3.0). Fluorescence intensity was pH dependent, being maximal at pH 3.0 and linear at quinolone concentrations between 1 and 200 ng/ml. A protocol for the fluorometric monitoring of fleroxacin uptake in Escherichia coli was developed. Intracellular quinolone concentrations measured by the fluorometric assay correlated **well** with values obtained by the bioassay. The results indicate that the fluorometric assay is an attractive alternative to the more laborious bioassay.
ST **ESCHERICHIA-COLI** QUINOLONE **DETERMINATION** EXCITATION MAXIMUM ADMISSION MAXIMUM **SENSITIVITY** PH EFFECTS ANTIBACTERIAL-DRUG BIOLOGICAL INSTRUMENTATION PHARMACEUTICAL INDUSTRY **ANTIBIOTICS**

L16 ANSWER 13 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 89:2108 BIOSIS
DN BA87:2108
TI LABORATORY **DETECTION** OF HIGH-LEVEL AMINOGLYCOSIDE-AMINOCYCLITOL RESISTANCE IN **ENTEROCOCCUS**-SPP.
AU SPIEGEL C A
CS UNIV. WISCONSIN HOSP. AND CLINICS, CLINICAL SCI. CENT., 600 HIGHLAND AVE., MADISON, WIS. 53791-9452.
SO J CLIN MICROBIOL 26 (11). 1988. 2270-2274. CODEN: JCMIDW ISSN: 0095-1137
LA English
AB Methods for detection of high-level resistance to aminoglycoside-aminocyclitol **antibiotics** were evaluated using 104 blood isolates of enterococci (97 Enterococcus faecalis and 7 Enterococcus faecium). Kanamycin was used to predict resistance to amikacin. Discrepancies between methods were resolved by time-kill studies. Four methods (MicroScan, macrotube, microtiter, and disk diffusion) for detecting resistance to gentamicin and streptomycin were compared, using 51 consecutive strains. There were 13 gentamicin-resistant strains, all of which were detected by macrotube, microtiter, and disk diffusion. MicroScan detected 2 (15%) of the 13. Of the 18 streptomycin-resistant strains, 17 (93%) were detected by disk diffusion, 16 (89%) by microtiter, 9 (50%) by macrotube, and 6 (33%) by MicroScan. An additional 53 consecutive strains were examined only by disk diffusion and microtiter for resistance to gentamicin, streptomycin, and kanamycin. The entire population of 104 strains contained 35 gentamicin-, 22 streptomycin-, and 54 kanamycin-resistant enterococcal isolates. All 35 gentamicin-resistant strains were detected by both methods. Of the 22 streptomycin-resistant strains, 1 was detected only by microtiter, 2 only by disk diffusion, and 19 by both methods. Of the 54 kanamycin-resistant strains, 1 was detected only by microtiter, 2 only by disk diffusion, and 51 by both methods. One additional strain which was resistant only by disk diffusion was susceptible to amikacin plus penicillin by time-kill studies. Disk diffusion is a suitable method for detection of high-level aminoglycoside-aminocyclitol resistance in E. faecalis and is **well** suited for sporadic **testing**. Additional data are necessary to determine the suitability of these tests for E. faecium.

ST ENTEROCOCCUS-FAECALIS ENTEROCOCCUS-FAECIUM KANAMYCIN AMIKACIN GENTAMICIN STREPTOMYCIN PENICILLIN ANTIBACTERIAL-DRUG MICROSCAN MACROTUBE MICROTITER DISK DIFFUSION

L16 ANSWER 14 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:415126 BIOSIS
DN BA86:77738
TI **DETERMINATION** OF **SUSCEPTIBILITY** OF ANAEROBIC **BACTERIA** TO BETA LACTAM **ANTIBIOTICS** BY A TABLET DIFFUSION **TEST**.
AU JANSEN J E; BREMMELGAARD A
CS FUGLSANGPARK 74, DK-3520 FARUM, DENMARK.
SO APMIS (ACTA PATHOL MICROBIOL IMMUNOL SCAND) 96 (5). 1988. 464-470. CODEN: APMSEL
LA English
AB A standardized tablet diffusion **test** and a reference agar dilution **test** was evaluated for **susceptibility testing** of anaerobic bacteria to beta-lactam **antibiotics**. 74 freshly isolated anaerobic bacteria and three control strains (Clostridium perfringens ATCC 13124 Bacteroides fragilis ATCC 25288, B. thetaiotaomicron ATCC 29741) were **tested**. The in vitro activities of 7 beta-lactam **antibiotics** were compared with metronidazole and clindamycin. Most active were metronidazole and clindamycin. Cefoxitin had the best activity of the beta-lactam **antibiotics**, whereas piperacillin and carbenicillin had good activities. High resistance rates were found for penicillin, ampicillin, cefuroxime and cefotaxime. MIC on control strains fell **well** within range set by the National Committee for Clinical Laboratory Standards (NCCLS). Correlation between MIC and inhibition zone diameters was generally good. Tablet diffusion can be used to divide anaerobic bacteria into three **susceptibility** categories. In addition all bacterial strains were **tested** for production of beta-lactamase by a nitrocefin tube **test**. Beta-lactamase production by the nitrocefin **test** indicated reduced **sensitivity** to beta-lactam **antibiotics**.
ST CLOSTRIDIUM-PERFRINGENS BACTEROIDES-FRAGILIS BACTEROIDES-THETAIOTAOMICRON METRONIDAZOLE CLINDAMYCIN CEFOXITIN PIPERACILLIN CARBENICILLIN PENICILLIN AMPICILLIN CEFUROXIME CEFOTAXIME ANTIBACTERIAL-DRUG BETA LACTAMASE

L16 ANSWER 15 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 88:175097 BIOSIS
DN BA85:87199
TI **DETECTION** OF BETA LACTAMASE-PRODUCING **BACTERIA** FROM FEMALE PATIENTS WITH ACUTE UNCOMPLICATED CYSTITIS.
AU OHKAWA M; YAMAGUCHI K; ORITO M; SHIMAMURA M; HIRANO S; HISAZUMI H
CS DEP. UROL., SCH. MED., KANAZAWA UNIV.
SO ACTA UROL JPN 33 (11). 1987. 1800-1805. CODEN: HIKYAJ ISSN: 0018-1994
LA Japanese
AB A total of 122 bacterial strains isolated from urine specimens of 113 female patients with acute uncomplicated cystitis were used for the study of .beta.-lactamase production and their **susceptibility** to various **antimicrobial** agents was determined. .beta.-Lactamase activity was qualitatively determined by a paper strip acidimetric method with benzylpenicillin as substrate and by

chromogenic cephalosporin methods using pyridine-2-azo-p-dimethylaniline cephalosporin or nitrocefin as substrate. **Susceptibility** to **antimicrobial** agents, including ampicillin, carbenicillin, cephalexin, cephalothin, gentamicin, minocycline, fosfomycin, pipemidic acid and sulfamethoxazole-trimethoprim was examined by a disc method. The .beta.-lactamase-producing strains detected by at least one of the three **tests** were found in 18 of 105 Escherichia coli isolates and in the single strain of Enterobacter cloacae isolated. However, none of the gram-positive cocci isolated, including 12 strains of Staphylococcus epidermidis, 3 Enterococcus faecalis and 1 Staphylococcus aureus produced .beta.-lactamase. The isolation rate of strains resistant to ampicillin, carbenicillin and cephalothin in the .beta.-lactamase-producing strains was significantly higher than that in the non-.beta.-lactamase-producing strains ($p<0.01$). These results suggest that .beta.-lactamase plays an important role in developing resistance to .beta.-lactam **antibiotics** in patients with uncomplicated urinary tract infection as **well** as complicated infection.

ST ESCHERICHIA-COLI ENTEROBACTER-CLOACAE ENTEROCOCCUS-FAECALIS STAPHYLOCOCCUS-EPIDERMIDIS STAPHYLOCOCCUS-AUREUS AMPICILLIN CARBENICILLIN CEPHALEXIN CEPHALOTHIN GENTAMICIN MINOCYCLINE FOSFOMYCIN PIPEMIDIC ACID SULFAMETHOXAZOLE-TRIMETHOPRIM ANTIBACTERIAL-DRUG ANTIBIOTIC RESISTANCE

L16 ANSWER 16 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 87:443210 BIOSIS
DN BA84:99048
TI EVALUATION OF THE STREP-A-CHEK TECHNIQUE FOR PRESUMPTIVE **IDENTIFICATION** OF GROUP A BETA HEMOLYTIC **STREPTOCOCCI** AND GROUP D **ENTEROCOCCI**.
AU DALY J A; RUFENER M L
CS DEP. PATHOL., PRIMARY CHILD. MED. CENT. 320 12TH AVE., SALT LAKE, UTAH 84103.
SO DIAGN MICROBIOL INFECT DIS 7 (3). 1987. 215-218. CODEN: DMIDDZ ISSN: 0732-8893
LA English
AB Strep-A-Check (E-Y Laboratories, San Mateo, CA) is a 15-min chromogenic **test** for a species-specific aminopeptidase that could replace **testing** bacitracin **susceptibility** for presumptive identification of group A streptococci as **well** as 6.5% NaCl agar tolerance for presumptive identification of enterococcal streptococci, with a time savings of 24 hr. Recent clinical streptococcal isolates (n = 341), identified by conventional biochemical and serologic techniques, were used to evaluate the 15-min Strep-A-Chek **test**. Among the .beta.-hemolytic streptococci (176 group A, 43 group B, 8 group C, 9 group F, and 9 group G), Strep-A-Chek was 100% accurate. Among the non-.beta.-hemolytic streptococci, 100% of 52 group D enterococci, 100% of 30 viridans streptococci, and 100% of 14 group D nonenterococci were corectly identified by Strep-A-Chek. Strep-A-Chek is an extremely rapid and reliable **test** for presumptive identification of group A and enterococcal streptococci.
ST HUMAN CHROMOGENIC AMINOPEPTIDASE ASSAY

L16 ANSWER 17 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 87:165011 BIOSIS

DN BA83:83452
TI **DETECTION** OF INTRINSICALLY RESISTANT HETERORESISTANT **STAPHYLOCOCCUS**-AUREUS WITH THE SCEPTOR AND AUTOMICROBIC SYSTEMS.
AU HANSEN S L; WALSH T J
CS LABORATORY SERVICE, VETERANS ADMINISTRATION MEDICAL CENTER, BALTIMORE, MARYLAND 21218.
SO J CLIN MICROBIOL 25 (2). 1987. 412-415. CODEN: JCMIDW ISSN: 0095-1137
LA English
AB Modified procedures for the Sceptor Gram-Positive MIC Panel and the Vitek AutoMicrobic System GPS-M Card were evaluated for their ability to detect methicillin-resistant (heteroresistant) Staphylococcus aureus. A total of 398 clinical isolates (including 222 methicillin-resistant S. aureus) obtained from 10 hospitals were **tested**. Both systems had 2% NaCl in the oxacillin **wells**. Sceptor MIC panels were inoculated with an organism suspension prepared from an 18- to 24-h blood agar plate and were inoculated for a full 24 h at 35.degree. C before MICs were read. All methicillin-resistant S. aureus isolates were detected as resistant to oxacillin at .gtoreq. 8 .mu.g/ml by the Sceptor method and at > 2 .mu.g/ml by the Vitek method. All 176 oxacillin-**susceptibile** , methicillin-susceptible S. aureus isolates were correctly distinguished from methicillin-resistant S. aureus isolates by Sceptor. However, with the Vitek system 29 methicillin-susceptible S. aureus isolates **tested** as falsely resistant to oxacillin and four isolates **tested** as falsely resistant to vancomycin. The modified **testing** procedure with the Sceptor system can be used reliably for accurate **susceptibility testing** of methicillin-resistant and methicillin-susceptible S. aureus. The Vitek GPS-M card does not accurately discriminate between methicillin-resistant and methicillin-susceptible S. aureus with an oxacillin breakpoint of > 2 .mu.g/ml.
ST HUMAN METHICILLIN-RESISTANT METHICILLIN-SUSCEPTIBLE OXACILLIN VANCOMYCIN ANTIBACTERIAL-DRUG ACCURACY

L16 ANSWER 18 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 87:25129 BIOSIS
DN BA83:15063
TI EVALUATION OF LABORATORY TESTS FOR **DETECTION** OF METHICILLIN-RESISTANT **STAPHYLOCOCCUS**-AUREUS AND **STAPHYLOCOCCUS**-EPIDERMIDIS.
AU COUDRON P E; JONES D L; DALTON H P; ARCHER G L
CS LAB. SERVICES, MCGUIRE VETERANS ADMINISTRATION MED. CENTER, DEP. PATHOLOGY, MED. COLLEGE VIRGINIA, RICHMOND, VA 23249.
SO J CLIN MICROBIOL 24 (5). 1986. 764-769. CODEN: JCMIDW ISSN: 0095-1137
LA English
AB Few studies evaluating **susceptibility testing** of methicillin-resistant staphylococci have included isolates of Staphylococcus epidermidis, a known pathogen in many types of serious infections. We **tested** 175 S. epidermidis and 95 Staphylococcus aureus isolates to determine the most sensitive procedures for detecting methicillin-resistant staphylococci. Reference procedures included agar dilution with methicillin and 4% NaCl in the agar and broth microdilution with methicillin and 2% NaCl in cation-supplemented Mueller-Hinton broth. After 24 h of

incubation, the results from both methods correlated **well** and were within 1 log2 dilution for all isolates **tested**. Only one-half of all resistant isolates (92 of 183) were detected at 18 h by using the standard disk diffusion technique with 5-.mu.g methicillin disks, and even fewer were detected with 10-.mu.g methicillin disks and newly recommended zone-size criteria. However, the standard disk diffusion method with 4% NaCl in the agar increased the sensitivity and specificity for identification of the proper phenotype to greater than 92%. The spread plate and new spot techniques, both using agar with 4% NaCl, were also sensitive methods. Of 47 S. epidermidis isolates **tested** against oxacillin, 6 (13%) were oxacillin susceptible but methicillin resistant. Two automated systems, the Automicrobic system (Vitek Systems) and MiroScan (American MicroScan), as **well** as two broth screening systems available from Remel and Austin Biological Laboratories, failed to detected several resistant isolates, depending on the species.

ST AGAR DILUTION BROTH MICRODILUTION STANDARD DISK DIFFUSION SPREAD PLATE SPOT TECHNIQUE OXACILLIN SUSCEPTIBILITY AUTOMICROBIC SYSTEM MICROSCAN SYSTEM ANTIBACTERIAL-DRUG

L16 ANSWER 19 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 86:218039 BIOSIS
DN BA81:109339
TI COMPARATIVE EVALUATION OF FOUR SYSTEMS FOR **DETERMINING** SUSCEPTIBILITY OF GRAM-POSITIVE **ORGANISMS**.
AU HENRY D; KUNZER L; NGUI-YEN J; SMITH J
CS VANCOUVER GENERAL HOSPITAL, VANCOUVER, BRITISH COLUMBIA, CANADA V5Z 1M9.
SO J CLIN MICROBIOL 23 (4). 1986. 718-724. CODEN: JCMIDW ISSN: 0095-1137
LA English
AB A study was undertaken to compare four commercial systems for **testing** the **antimicrobial susceptibility** patterns of gram-positive cocci. The reference method was an agar dilution method. The systems evaluated were the MS-2 system (Abbott Diagnostics Div., Mississauga, Ontario), the AutoMicrobic system (AMS) (Vitek Systems, Inc., Hazlewood, Mo.) with the gram-positive **susceptibility** (GPS) card, the Sceptor system (BBL Microbiology Systems, distributed by Becton Dickenson, Canada Inc., Mississauga, Ontario), and the Micro-Media system (Beckman Instruments, Inc., Anaheim, Calif.). There was a > 98% essential accord (EA) between all **test** results and the reference method results when **testing** 134 isolates of Staphylococcus aureus. In **testing** 79 isolates of coagulase-negative staphylococci the EA was > 97% with all systems except the MS-2. In the MS-2 system only, 30% of **tests** were interrupted by the instrument because of insufficient growth in the control **chamber**. Excluding the Sceptor system, the EA was > 96% on **testing** 70 isolates of enterococcus. In **testing** 15 isolates of group B Streptococcus there was 91% EA with the AMS and Sceptor systems and only 71 and 88% EA with the MS-2 and Micro-Media systems, respectively. The new AMS GPS MIC card was **tested** against 29 methicillin-resistant S. aureus, 10 coagulase-negative staphylococci, and 9 enterococci, and it gave more accurate results than the earlier GPS breakpoint card. The Micro-Media and MS-2 systems did not reliably detect marginally methicillin-resistant S.

aureus. The MS-2 was the least expensive system to operate on a cost per **test** basis (3.59 Can.), whereas the Sceptor was the most expensive system (5.29 Can.). The AMS was the least labor intensive (0.9 min per **test**), and the Sceptor system was the most time consuming (2.9 min per **test**).
ST STAPHYLOCOCCUS-AUREUS STREPTOCOCCUS MS-2 SYSTEM AUTOMICROBIC SYSTEM SCEPTOR SYSTEM MICRO-MEDIA SYSTEM TIME ACCURACY COST METHICILLIN-RESISTANCE

L16 ANSWER 20 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 86:163007 BIOSIS
DN BA81:73423
TI ELISA FOR THE **DETECTION** OF ANTIBODIES TO NUTRITIONALLY VARIANT **STREPTOCOCCI** IN PATIENTS WITH ENDOCARDITIS.
AU VAN DE RIJN I; GEORGE M; BOUVET A; ROBERTS R B
CS WAKE FOREST UNIVERSITY MEDICAL CENTER, 300 SOUTH HAWTHORNE ROAD, WINSTON-SALEM, NORTH CAROLINA 27103.
SO J INFECT DIS 153 (1). 1986. 116-121. CODEN: JIDIAQ ISSN: 0022-1899
LA English
AB The viridans streptococci are responsible for 50%-55% of microbial endocarditis. Among these varied species, the nutritionally variant streptococci (NVS) have recently been associated with culture-negative endocarditis and are responsible for 5%-10% of all streptococcal endocarditis. The isolation and identification of these bacteria has been hampered by the extremely fastidious nature of their growth requirements as **well** as by their slow growth rate. In addition, their **antibiotic sensitivity** varies greatly, a characteristic leading to a higher rate of morbidity and mortality that is found in patients with non-NVS endocarditis. For these reasons sera from patients with NVS endocarditis were examined for antibodies to the NVS serotype I antigen by using an enzyme-linked immunosorbent asasy. Seventy-four percent of patients with NVS endocarditis had elevated titers to this antigen. None of the sera from controls and only 6.7% of the sera from patients with non-NVS streptococal endocarditis showed increased titers. These results indicate that antibody to the NVS serotype I antigen can serve as a marker for NVS endocarditis.
ST VIRIDANS STREPTOCOCCI GROWTH REQUIREMENT SLOW GROWTH RATE **ANTIBIOTIC SENSITIVITY** MORTALITY RATE ANTIBODY MARKER

L16 ANSWER 21 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 85:417195 BIOSIS
DN BA80:87187
TI ASSESSMENT OF RAPID METHODS OF PNEUMOCOCCAL ANTIGEN **DETECTION** IN ROUTINE SPUTUM **BACTERIOLOGY**.
AU WHITBY M; KRISTINSSON K G; BROWN M
CS DEP. MICROBIAL DISEASES, CITY HOSPITAL, HUCKNALL ROAD, NOTTINGHAM NG5 1PB, ENGLAND.
SO J CLIN PATHOL (LOND) 38 (3). 1985. 341-344. CODEN: JCPAAK ISSN: 0021-9746
LA English
AB Sputum specimens from 480 patients were examined for the presence of pneumococci by Gram film and culture and for pneumococcal antigen by counterimmunoelectrophoresis, coagglutination and latex agglutination. Positive specimens (96) were detected. Gram film and culture provided the most reliable techniques in **well** taken

specimens collected early in the illness before **antibiotic** treatment had started. More than 70% of the specimens examined were submitted after starting **antibiotics** and in these specimens, methods of antigen detection proved of greater value than either Gram film or culture. Counterimmunoelectrophoresis, coagglutination and latex agglutination were similar in **sensitivity** and specificity, but coagglutination and latex agglutination were much easier to perform and to read.
ST HUMAN

L16 ANSWER 22 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 85:270628 BIOSIS
DN BA79:50624
TI EVALUATION OF A NEW SYSTEM FOR **IDENTIFICATION** AND **ANTIBIOTIC SUSCEPTIBILITY** OF GRAM-NEGATIVE AEROBIC **BACTERIA**.
AU MORANDOTTI G; LEONE F
CS UNIV. CATTOLICA DEL SACRO CUORE, FAC. DI MED. E CHIRURGIA A. GEMELLI, ISTITUTO DI MICROBIOLOGIA.
SO IG MOD 82 (3). 1984. 402-409. CODEN: IGMPAX ISSN: 0019-1655
LA Italian
AB The Sceptor system (BBL), which used 84 **well** plastic trays containing dried **antimicrobial** or biochemical substrates, was **tested** for identification and **antibiotic susceptibility testing** of gram-negative clinical isolates. The Sceptor system proved to satisfactory for the identification of clinical isolates. For most **antimicrobial** agents, Sceptor was generally in agreement (.+-.log2 dilution) with the reference microdilution method. The system proved to be accurate, reliable and applicable in clinical microbiology laboratories.
ST SCEPTOR SYSTEM

L16 ANSWER 23 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 84:353267 BIOSIS
DN BA78:89747
TI MINIMAL **BACTERICIDAL** CONCENTRATIONS FOR **STAPHYLOCOCCUS**-AUREUS AS **DETERMINED** BY MACRO DILUTION AND MICRO DILUTION TECHNIQUES.
AU SHANHOLTZER C J; PETERSON L R; MOHN M L; MOODY J A; GERDING D N
CS LAB. SERV., MICROBIOL. SECT., VETERANS ADM. MED. CENT., MINNEAPOLIS, MINN. 55417.
SO ANTIMICROB AGENTS CHEMOTHER 26 (2). 1984. 214-219. CODEN: AMACCQ ISSN: 0066-4804
LA English
AB MBC [minimal bactericidal concentration] **testing** of clindamycin, methicillin, cephalothin, gentamicin and vancomycin with 67 clinical isolates of S. aureus was examined by standard macrodilution tubes and commercial microdilution trays. Standard macrodilution failed to give reproducible (99.9% killing) MBC results, even when a strictly defined protocol was followed. Continuous shaking during incubation resulted in regrowth of more colonies than did stationary incubation. Vortexing of incubated tubes before subculture resulted in regrowth of more colonies than did careful transfer of the contents to sterile tubes before vortexing and subculture. No significant difference in MBCs was demonstrated by the use of log-phase vs. stationary-phase inocula. Use of the multiprong inoculator for subculture from commercial microdilution

trays was unsatisfactory because, although **antibiotics** evaluated were inactivated by subculture to a pH 5.5 agar plate coated with a .beta.-lactamase solution, the volume of broth transferred by the prongs was small and inconsistent, ranging from 0-3 .mu.l. Subcultures of commercial microdilution panels with a 1-.mu.l loop, 10-.mu.l pipette and 100-.mu.l pipette were also evaluated. Results of MBC **testing** were most reproducible when the entire 100-.mu.l volume was aspirated from commercial microdilution **wells** after stirring and the contents of each **well** were spread over a separate sheep blood agar plate.

ST SHEEP BLOOD AGAR PLATES CLINDAMYCIN METHICILLIN CEPHALOTHIN GENTAMICIN VANCOMYCIN ANTIBACTERIAL-DRUG

L16 ANSWER 24 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS

AN 83:166558 BIOSIS

DN BA75:16558

TI USE OF STATISTICAL METHODS IN THE RAPID **DETERMINATION** OF **ANTI MICROBIAL SUSCEPTIBILITIES** OF **ESCHERICHIA-COLI**.

AU SHINE P J; BASCOMB S; GAYA H; SPENCER R C; GLYNN A A

CS PHARMACOLOGY DEPARTMENT, INSTITUTE OF PSYCHIATRY, DE CRESPIGNY PARK, DENMARK HILL, LONDON SE5 8AF, ENGLAND.

SO J ANTIMICROB CHEMOTHER 9 (6). 1982. 433-444. CODEN: JACHDX ISSN: 0305-7453

LA English

AB A rapid method for determination of minimum inhibitory concentrations (MIC) for E. coli in broth cultures was developed. Each strain was **tested** against 11 concentrations of an **antimicrobial** agent in 2-fold dilution series as **well** as positive and negative controls. The agents **tested** were: ampicillin, nalidixic acid, nitrofurantoin, sulfamethoxazole, tetracycline and trimethoprim. Extinction measurements by a continuous flow method, after 3-4 h incubation, were used to estimate growth of 203 bacterial strain/**antimicrobial** agent combinations and expressed as a percentage of that obtained in a control broth. The conventional MIC for these strains were determined by the 2-fold serial dilution tube method. The strains were also **tested** for disk **susceptibility** by the Stokes method. Percentages of growth obtained by the rapid method were used to predict conventional MIC in 2 ways: a cut-off point, and a linear regression equation using the percent growth in 1, 2 or all 11 concentrations. The cut-off method gave 79% agreement, within .+-. 1 dilution, with conventional MIC. The regression models with 1, 2 or 11 concentrations gave 95, 95 and 98% agreement, respectively. The regression model permitted determination of MIC from growth measurements in only 3 tubes. For sulfamethoxazole a larger number of tubes may be needed. Discriminant function analysis was used to categorize strains into susceptible and resistant on the basis of the growth measurements. This model gave 100% agreement with conventional disk **susceptibility testing**. The model permitted prediction of **susceptibility** to sulfamethoxazole with 3 h incubation using 4 tubes.

ST AMPICILLIN NALIDIXIC-ACID NITROFURANTOIN SULFAMETHOXAZOLE TETRACYCLINE TRIMETHOPRIM ANTIBACTERIAL-DRUG MINIMUM INHIBITORY CONCENTRATION

L16 ANSWER 25 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS

AN 82:296839 BIOSIS
DN BA74:69319
TI PRESUMPTIVE **IDENTIFICATION** OF **STREPTOCOCCI** WITH A NEW TEST SYSTEM.
AU FACKLAM R R; THACKER L G; FOX B; ERIQUEZ L
CS CENT. INFECTIOUS DISEASES, CENT. DISEASE CONTROL, ATLANTA, GEORGIA 30333.
SO J CLIN MICROBIOL 15 (6). 1982. 987-990. CODEN: JCMIDW ISSN: 0095-1137
LA English
AB A **test** is described that could replace bacitracin **susceptibility** for presumptive identification of group A streptococci as **well** as 6.5% NaCl agar tolerance for presumptive identification of enterococcal streptococci. The L-pyrrolidonyl-.beta.-naphthylamide **test**, based on hydrolysis of pyrrolidonyl-.beta.-naphthylamide, was used in conjunction with the CAMP [Christie Atkins Munch Petersen] and bile-esculin **tests** to presumptively identify the streptococci. Among the .beta.-hemolytic streptococci; 98% of 50 group A, 98% of 46 group B and 100% of 70 strains that were not group A, B or D were correctly identified by the new presumptive **test** scheme. Among the non-.beta.-hemolytic streptococci; 96% of 74 group D enterococcal, 100% of 30 group D nonenterococcal and 82% of 112 viridans strains were correctly identified by the new presumptive **test** scheme.
ST VIRIDANS STRAIN L PYRROLIDONYL-BETA NAPHTHYLAMIDE TEST BILE ESCULIN CHRISTIE ATKINS MUNCH PETERSEN SODIUM CHLORIDE AGAR TOLERANCE BETA HEMOLYSIS BACITRACIN ANTIBACTERIAL-DRUG

L16 ANSWER 26 OF 26 BIOSIS COPYRIGHT 1998 BIOSIS
AN 82:151018 BIOSIS
DN BA73:11002
TI COMPARISON OF METHODS FOR **IDENTIFYING** **STAPHYLOCOCCUS**-SPP AND MICROCOCCUS-SPP.
AU GUNN B A; SINGLETON F L; PEELE E R; COLWELL R R; KEISER J K; KAPFER C O
CS DEP. OF MICROBIOL., UNIV. OF MARYLAND, COLLEGE PARK, MARYLAND 20742.
SO J CLIN MICROBIOL 14 (2). 1981. 195-200. CODEN: JCMIDW ISSN: 0095-1137
LA English
AB Three methods employed to distinguish staphylococci from micrococci were compared, using clinical and environmental strains. When these methods are used, misinterpretation of results, as **well** as erratic results may occur, and suggestions for eliminating these problems are provided. The most sensitive **test** that combines ease of use and speed in obtaining results for distinguishing the 2 genera is the lysostaphin **susceptibility** **test**. Two other **tests** [facultatively anaerobic growth in semisolid thioglycolate agar and fermentation of dextrose) may also be used to distinguish these 2 genera, but results are often slow in developing, are subject to technical difficulties and may lead to incorrect assignment of certain species of staphylococci and micrococci to their proper genera.
ST DEXTROSE FERMENTATION SEMI SOLID THIO GLYCOLATE AGAR ANAEROBIC GROWTH LYSOSTAPHIN **SUSCEPTIBILITY TEST** ANTIBACTERIAL-DRUG

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=> fil medline

FILE 'MEDLINE' ENTERED AT 10:48:05 ON 26 OCT 1998

 FILE LAST UPDATED: 21 OCT 1998 (19981021/UP).  FILE COVERS 1966 TO DATE.

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 MESH (MEDICAL SUBJECT HEADING) CHANGES.  ENTER HELP RLOAD FOR DETAILS.

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 SUBSTANCE IDENTIFICATION.

=> d his l170

L170 NOT FOUND
ENTER (L1-), L#, OR ?:end


=> d his l17-


     (FILE 'BIOSIS' ENTERED AT 10:33:34 ON 26 OCT 1998)

     FILE 'MEDLINE' ENTERED AT 10:35:17 ON 26 OCT 1998
L17            1 S (APPARATUS AND METHOD AND DETECT? AND BACTER?)/TI
                 E BACTERIOLOGICAL TECHNIQUES/CT
                 E E3+ALL
                 E E10+ALL
L18            1 S (SUSCEPTIBI? AND APPARATUS)/TI
L19          938 S  (BACTERIA? (L) DETECT?)/TI
                 E STREPTOCOCCACEAE/CT
                 E E3+BT
                 E E3+BT
L20        91528 S BACTERIA+NT/CT (L) IP./CT
                 E SUSCEPTIBILITY TESTING/CT
L21         2232 S (SUSCEPTIBILITY TESTING)
                 E MICROBIAL SENSITIVITY TESTS+NT/CT
                 E MICROBIAL SENSITIVITY TESTS+ALL/CT
L22        33277 S MICROBIAL SENSITIVITY TESTS+NT/CT
L23         5067 S L20 AND L22
L24        39780 S L20/MAJ
L25         1484 S L24 AND L22
L26       636885 S APPARATUS OR WELL# OR CHAMBER#
L27           90 S L25 AND L26
L28            0 S L22 (L) MT./T
L29            0 S L22 (L) MT.CT
L30         2154 S L22 (L) MT./CT
L31            5 S L30 AND L27

     FILE 'MEDLINE' ENTERED AT 10:48:05 ON 26 OCT 1998

=> d .med 1-5


L31  ANSWER 1 OF 5  MEDLINE
AN   97305994     MEDLINE
DN   97305994
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TI Rapid detection of oxacillin-resistant Staphylococcus aureus in blood cultures by an impedance method.
AU Wu J J; Huang A H; Dai J H; Chang T C
CS Department of Medical Technology, National Cheng Kung University Medical College, Tainan, Taiwan, Republic of China.
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1997 Jun) 35 (6) 1460-4. Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199709
EW 19970902
AB The feasibility of using an impedance method for direct detection of oxacillin-resistant Staphylococcus aureus (ORSA) in blood cultures was evaluated. An aliquot (0.1 ml) of the positive blood culture, which showed growth of gram-positive cocci and demonstrated thermonuclease activity, was inoculated into the module **well** of a Bactometer incubator (bioMerieux Vitek, Hazelwood, Mo.) containing 0.6 ml of Mueller-Hinton agar supplemented with oxacillin (2 microg/ml). The modules were incubated at 37 degrees C, and the change in impedance in each **well** was continuously monitored by the instrument at 6-min intervals for 24 h. ORSA strains from blood cultures could multiply in the oxacillin-containing medium, and a time point (detection time [DT]) at which an accelerating change of impedance occurred in the medium was obtained, with an average of 5.5 h. The growth of oxacillin-sensitive S. aureus (OSSA) strains was largely inhibited, and no DT was obtained for these strains within an incubation period of 24 h. For 96 positive blood cultures (38 ORSA and 58 OSSA) tested, 36 and 57 were found to be oxacillin resistant and oxacillin sensitive, respectively, by the impedance method. The impedance method had a sensitivity and specificity of 94.7 and 98.3%, respectively, for the detection of ORSA and had an agreement of 96.9% with the disc diffusion method. Comparable results were obtained by the testing of 235 clinical stock cultures of S. aureus (149 ORSA and 86 OSSA). The impedance test is simple for detecting ORSA in blood cultures and may allow proper antimicrobial treatment almost 36 h before the results of the conventional culture methods are available.
CT Check Tags: Human; Support, Non-U.S. Gov't
Bacteremia: DI, diagnosis
Bacteremia: MI, microbiology
Electric Impedance
***Microbial Sensitivity Tests: MT, methods**
Micrococcal Nuclease: ME, metabolism
*Oxacillin: PD, pharmacology
Penicillin Resistance
*Penicillins: PD, pharmacology
Sensitivity and Specificity
Staphylococcal Infections: DI, diagnosis
Staphylococcal Infections: MI, microbiology
*Staphylococcus aureus: DE, drug effects
Staphylococcus aureus: GD, growth & development
***Staphylococcus aureus: IP, isolation & purification**

L31 ANSWER 2 OF 5 MEDLINE

AN 97083511 MEDLINE
DN 97083511
TI Rapid detection of the staphylococcal mecA gene from BACTEC blood culture bottles by the polymerase chain reaction.
AU Carroll K C; Leonard R B; Newcomb-Gayman P L; Hillyard D R
CS Associated Regional and University Pathologists, Inc., Salt Lake City, Utah, USA.
SO AMERICAN JOURNAL OF CLINICAL PATHOLOGY, (1996 Nov) 106 (5) 600-5. Journal code: 3FK. ISSN: 0002-9173.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 199703
AB A rapid polymerase chain reaction (PCR) method for the direct detection of the staphylococcal mecA gene from BACTEC blood culture bottles (Becton Dickinson, Sparks, MD) was developed. Published primer sequences and sample preparation using Achromopeptidase for cell lysis were adapted to the use of the Idaho Technology Air Thermocycler 1605 (Idaho Technologies, Idaho Falls, ID). The method was validated with 80 strains of coagulase-positive and coagulase-negative geographically diverse methicillin-resistant and susceptible isolates of staphylococci. There was a 100% correlation between the PCR results and the results of standard susceptibility testing methods. From BACTEC 9240 blood cultures, mixed aliquots of blood and broth containing gram-positive cocci in clusters were centrifuged at low speed to sediment red blood cells. After additional centrifugation and wash steps, PCR was performed on the resuspended pellet. The turnaround time from initial Gram stain detection of positive BACTEC bottles to PCR amplicon detection by agarose gel electrophoresis is less than 3 hours. In a clinical evaluation of 181 blood culture isolates, there was a 99% correlation with standard susceptibility results for Staphylococcus aureus. Discrepant results for Staphylococcus aureus isolates were verified by a Mueller Hinton plate supplemented with 6 microg/mL of oxacillin and 2% sodium chloride. For coagulase-negative staphylococci, the PCR method detected an additional seven resistant isolates that were reported by the Vitek as susceptible. Coagulase-negative staphylococcal susceptibility results that were in disagreement with the PCR assay were confirmed by the disk-diffusion method. This procedure is accurate, rapid and fits **well** into laboratory work flow. Rapid detection of the mecA gene on positive blood culture vials has become a routine test in the authors' clinical microbiology laboratory.
CT Check Tags: Human; In Vitro
*Bacterial Proteins: AN, analysis
*Bacteriological Techniques: IS, instrumentation
Culture Media: CH, chemistry
DNA, Bacterial: AN, analysis
*Methicillin Resistance: GE, genetics
Microbial Sensitivity Tests: MT, methods
*Polymerase Chain Reaction: MT, methods
Predictive Value of Tests
*Staphylococcal Infections: DI, diagnosis
Staphylococcus aureus: GE, genetics
***Staphylococcus aureus: IP, isolation & purification**

L31 ANSWER 3 OF 5 MEDLINE
AN 96084349 MEDLINE
DN 96084349
TI Tolerance of Staphylococcus epidermidis grown from indwelling vascular catheters to antimicrobial agents.
AU Khardori N; Yassien M; Wilson K
CS Department of Internal Medicine, Southern Illinois University School of Medicine, Springfield 62794-9230, USA.
SO JOURNAL OF INDUSTRIAL MICROBIOLOGY, (1995 Sep) 15 (3) 148-51. Journal code: ALF. ISSN: 0169-4146.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; B
EM 199603
AB During a prospective study of indwelling vascular catheter-related infections, 134 isolates of Staphylococcus epidermidis were grown from 700 catheter tips. In vitro antimicrobial susceptibility testing of these isolates to oxacillin, vancomycin and ofloxacin was performed using the standard broth microdilution technique. These results were compared to those for the same organisms grown in biofilm before the addition of antimicrobial agents. In 96-**well** flat bottom microtiter plates, 10(4)-10(5) colony forming units of S. epidermidis in 0.1 ml broth were grown for 18 h at 37 degrees C, at which time a biofilm was observed for all isolates. Different concentrations of antimicrobial agents (0.1 ml) were then added to the plates. The plates were incubated for 18 h at 37 degrees C. Since MICs could not be estimated in these plates, all the **wells** were subcultured after mixing the biofilm with the broth. Minimum bactericidal concentrations (MBCs) were defined as 99.9% reduction in colony forming units. For organisms grown in suspension, 100% of the isolates were susceptible to vancomycin, 81% to ofloxacin and 40% to oxacillin. MBCs of susceptible isolates were within four-fold differences for vancomycin (53%), oxacillin (50%), and ofloxacin (51%). When grown as a biofilm, 78%, 93% and 71% of isolates had MBCs of > or = 2048 micrograms ml-1 of oxacillin, vancomycin and ofloxacin respectively. These data demonstrate the reduced bactericidal activity of antimicrobial agents against S. epidermidis in a biofilm and a simple method for its detection in the microbiology laboratory.
CT Check Tags: Comparative Study; Human; In Vitro
Antibiotics: PD, pharmacology
Biofilms
*Catheters, Indwelling: AE, adverse effects
Drug Resistance, Microbial
Microbial Sensitivity Tests: MT, methods
Ofloxacin: PD, pharmacology
Oxacillin: PD, pharmacology
*Staphylococcal Infections: ET, etiology
Staphylococcal Infections: MI, microbiology
*Staphylococcus epidermidis: DE, drug effects
Staphylococcus epidermidis: GD, growth & development
***Staphylococcus epidermidis: IP, isolation & purification**
Vancomycin: PD, pharmacology

L31 ANSWER 4 OF 5 MEDLINE
AN 95395006 MEDLINE

DN 95395006
TI Detection of penicillin-resistant Streptococcus pneumoniae with commercially available broth microdilution panels [see comments].
CM Comment in: J Clin Microbiol 1996 Jan;34(1):232-3
AU Nolte F S; Metchock B; Williams T; Diem L; Bressler A; Tenover F C
CS Department of Pathology and Laboratory Medicine, Emory University School of Medicine, Atlanta, Georgia, USA.
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1995 Jul) 33 (7) 1804-6. Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199512
AB We compared penicillin MICs obtained with three different commercially available broth microdilution panels (MicroScan, Sensititre, and Pasco) with MICs obtained with reference microdilution panels for 20 **well**-characterized pneumococci with decreased susceptibilities to penicillin (7 resistant and 13 intermediate). All panels were supplemented with 2 to 5% lysed horse blood (LHB) prepared in-house. Additional supplements included fastidious inoculum broth (FIB) for MicroScan panels and commercially prepared LHB (Difco) for Pasco panels. The percentages of penicillin-resistant strains (MIC 2 micrograms/ml) detected by the different methods follow: MicroScan-FIB, 0; MicroScan-LHB 0; Pasco in-house LHB, 71; and Sensititre-LHB, 100. The percentages of intermediate strains (MIC = 0.1 to 1.0 micrograms/ml) detected by the different methods follow: MicroScan-FIB, 31; MicroScan-LHB 23; Pasco in-house LHB, 46; and Sensititre-LHB, 85. Difco LHB supplement failed to support the growth of 86% of the strains in the Pasco panels. Of the commercially available panels evaluated, only Sensititre, supplemented with LHB prepared in-house could reliably detect penicillin-resistant pneumococci.
CT Check Tags: Comparative Study; Human
Culture Media
Evaluation Studies
***Microbial Sensitivity Tests: MT, methods**
Microbial Sensitivity Tests: ST, standards
*Penicillin Resistance
Quality Control
*Streptococcus pneumoniae: DE, drug effects
***Streptococcus pneumoniae: IP, isolation & purification**

L31 ANSWER 5 OF 5 MEDLINE
AN 94141000 MEDLINE
DN 94141000
TI E test as susceptibility test and epidemiologic tool for evaluation of Neisseria meningitidis isolates [see comments].
CM Comment in: J Clin Microbiol 1994 Sep;32(9):2341-2
AU Hughes J H; Biedenbach D J; Erwin M E; Jones R N
CS Department of Pathology, University of Iowa College of Medicine, Iowa City 52242..
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1993 Dec) 31 (12) 3255-9. Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English

FS Priority Journals
EM 199405
AB The E test (AB Biodisk, Solna, Sweden), a new approach developed to test antimicrobial susceptibility, was compared with the agar dilution method for seven-drug antibiogram analysis of Neisseria meningitidis isolates. The overall E-test quantitative accuracy (+/- 1 log2 dilution) was 93% compared with that of agar dilution testing. The E test was then used to perform the susceptibility tests on a 10-year sample of 102 N. meningitidis isolates, including 5 from a recent epidemic outbreak in the University of Iowa (Iowa City) community. The E test proved to be an efficient methodology for identifying common source clusters of meningococcal disease having resistance to rifampin or sulfonamides. Moreover, the data demonstrated a recent increase in penicillin MICs (MIC for 90% of strains, 0.094 microgram/ml) and an escalation of high-level resistance to trimethoprimsulfamethoxazole (33%) and rifampin (14%). The E test should be considered a simple and accurate susceptibility method for the emerging need to test meningococci and other pathogenic neisserias. Chocolate Mueller-Hinton agar was observed to provide the best support of growth and E-test MIC results that correlated **well** with results of the reference agar dilution method previously used for neisserias.
CT Check Tags: Comparative Study; Human
Agar
Disease Outbreaks
Drug Resistance, Microbial
Epidemiologic Methods
Evaluation Studies
Iowa: EP, epidemiology
Meningococcal Infections: DT, drug therapy
Meningococcal Infections: EP, epidemiology
*Meningococcal Infections: MI, microbiology
***Microbial Sensitivity Tests: MT, methods**
Microbial Sensitivity Tests: SN, statistics & numerical data
*Neisseria meningitidis: DE, drug effects
***Neisseria meningitidis: IP, isolation & purification**